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DATE: Wednesday, December 08, 2004

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<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ</i>			
<input type="checkbox"/>	L17	L16 AND bFGF	209
<input type="checkbox"/>	L16	L15 AND neural stem cell	235
<input type="checkbox"/>	L15	L14 AND L10	553
<input type="checkbox"/>	L14	neuron AND oligodendrocyte AND astrocyte	1394
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<input type="checkbox"/>	L12	L11 AND stem cell	333
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<input type="checkbox"/>	L10	bFGF OR basic FGF OR FGF-2	7402
<input type="checkbox"/>	L9	L8 AND oligodendrocyte	665
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<input type="checkbox"/>	L7	L6 AND astrocyte	1554
<input type="checkbox"/>	L6	435/325,352,353,354,366,368,377.CCLS.	18254
<input type="checkbox"/>	L5	Salin-Nordstrom-T-H.IN.	1
<input type="checkbox"/>	L4	Salin-Nordstrom-Tuija-H.IN.	0
<input type="checkbox"/>	L3	Salin-Nordstrom.IN.	1
<input type="checkbox"/>	L2	Salin-Nordstrom-T.IN.	0
<input type="checkbox"/>	L1	(Salin-Nordstrom-Tuija.IN.)	0

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Search Results - Record(s) 1 through 1 of 1 returned.

1. Document ID: WO 200195861 A2, AU 200167091 A

Using default format because multiple data bases are involved.

L3: Entry 1 of 1

File: DWPI

Dec 20, 2001

DERWENT-ACC-NO: 2002-139690

DERWENT-WEEK: 200227

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: In vitro transdifferentiation of mammalian cells from glial cell type to neurons, oligodendrocytes and astrocytes, comprises culturing the cells to form group of cells and exposing the cells to a growth factor

INVENTOR: SALIN-NORDSTROM, T H

PRIORITY-DATA: 2000US-0644498 (August 23, 2000), 2000US-212240P (June 16, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>WO 200195861 A2</u>	December 20, 2001	E	029	A61K000/00
<u>AU 200167091 A</u>	December 24, 2001		000	A61K000/00

INT-CL (IPC): A61 K 0/00

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [RQMC](#) | [Drawn Desc](#)

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Terms	Documents
Salin-Nordstrom.IN.	1

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Search Results - Record(s) 1 through 1 of 1 returned.

1. Document ID: WO 200195861 A2, AU 200167091 A

Using default format because multiple data bases are involved.

L5: Entry 1 of 1

File: DWPI

Dec 20, 2001

DERWENT-ACC-NO: 2002-139690

DERWENT-WEEK: 200227

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: In vitro transdifferentiation of mammalian cells from glial cell type to neurons, oligodendrocytes and astrocytes, comprises culturing the cells to form group of cells and exposing the cells to a growth factor

INVENTOR: SALIN-NORDSTROM, T H

PRIORITY-DATA: 2000US-0644498 (August 23, 2000), 2000US-212240P (June 16, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>WO 200195861 A2</u>	December 20, 2001	E	029	A61K000/00
<u>AU 200167091 A</u>	December 24, 2001		000	A61K000/00

INT-CL (IPC): A61 K 0/00

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

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Terms	Documents
Salin-Nordstrom-T-H.IN.	1

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Search Results - Record(s) 1 through 100 of 169 returned.

1. Document ID: US 20040241839 A1

Using default format because multiple data bases are involved.

L13: Entry 1 of 169

File: PGPB

Dec 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040241839
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040241839 A1

TITLE: Culturing neural stem cells

PUBLICATION-DATE: December 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Svetlov, Stanislav I.	Gainesville	FL	US	
Kukekov, Valery G.	Gainesville	FL	US	

US-CL-CURRENT: 435/368; 435/354, 514/54

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequence](#) [Attachments](#) [Claims](#) [KMC](#) [Drawn Desc](#)

2. Document ID: US 20040235166 A1

L13: Entry 2 of 169

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235166
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040235166 A1

TITLE: Enhanced growth of adult stem cells

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Prockop, Darwin	Philadelphia	PA	US	
Sekiya, Ichiro	Tokyo	LA	JP	
Gregory, Carl	New Orleans	LA	US	
Spees, Jeffrey	New Orleans	LA	US	
Smith, Jason	New Orleans	LA	US	
Pochampally, Radhika	Marrero		US	

US-CL-CURRENT: 435/377; 435/325, 435/372, 435/384, 435/405

ABSTRACT:

The present invention encompasses methods and compositions for enhancing the growth of adult marrow stromal cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

3. Document ID: US 20040235159 A1

L13: Entry 3 of 169

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235159

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040235159 A1

TITLE: Medium for growing human embryonic stem cells

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandalam, Ramkumar	Union City	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/404

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem cells. Traditionally, pluripotent stem cells are cultured on a layer of feeder cells (such as mouse embryonic fibroblasts) to prevent them from differentiating. In the system described here, the role of feeder cells is replaced by components added to the culture environment that support rapid proliferation without differentiation. Effective features are a suitable support structure for the cells, and an effective medium that can be added fresh to the culture without being preconditioned by another cell type. Culturing human embryonic stem cells in fresh medium according to this invention causes the cells to expand surprisingly rapidly, while retaining the ability to differentiate into cells representing all three embryonic germ layers. This new culture system allows for bulk proliferation of pPS cells for commercial production of important products for use in drug screening and human therapy.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

4. Document ID: US 20040235158 A1

L13: Entry 4 of 169

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235158

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040235158 A1

TITLE: Method of purification of cells

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bartlett, Perry Francis	North Carlton		AU	
Rietze, Rodney Lee	Brunswick		AU	

US-CL-CURRENT: 435/366

ABSTRACT:

The present invention relates generally to a method for the generation of a substantially homogeneous population of undifferentiated cells. More particularly, the present invention relates to the purification of a substantially homogeneous population of stem cells and their progenitor or precursor cells. Even more particularly, the present invention provides a population of neural stem cells (NSCs). The subject invention is particularly directed to NSCs and precursor cells in the capacity to differentiate into cells and cell lineages required for the development, maintenance or repair of the central nervous system in an animal such as a mammal. The present invention is further directed to NSCs and progenitor and/or precursor cells which are capable of proliferation and differentiation into multiple cell lineages, such as but not limited to neurons, oligodendrocytes, glia and astrocytes. The subject invention further contemplates the use of NSCs and/or precursor cells for the repair or regeneration of tissue, such as tissue associated with the central nervous system, in an animal including a mammal. The NSCs of the present invention may be used to identify naturally occurring molecules such as cytokines as well as molecules obtained from natural product screening or screening of chemical libraries which induce proliferation of the NSCs. Such molecules are useful in the development of therapies.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KOMC	Drawn Des.
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 5. Document ID: US 20040224887 A1

L13: Entry 5 of 169

File: PGPB

Nov 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040224887

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040224887 A1

TITLE: Systems and methods for screening for modulators of neural differentiation

PUBLICATION-DATE: November 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jessel, Thomas	Bronx	NY	US	
Wichterle, Hynek	New York	NY	US	
Wilson, Sara I.	New York	NY	US	

US-CL-CURRENT: 514/12; 435/366, 435/4, 435/455

ABSTRACT:

The present invention provides in vitro systems for use in identifying modulators of neural differentiation. Also provided are modulators identified by these systems. The present invention further provides methods for identifying a modulator of neural differentiation, a modulator of a Wnt signalling pathway, a modulator of Wnt-

dependent neural differentiation, a modulator of a BMP signalling pathway, a modulator of BMP-dependent neural differentiation, a modulator of a Hh signalling pathway, and a modulator of Hh-dependent neural differentiation. Also provided are modulators identified by these methods.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Drawn Des.
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6. Document ID: US 20040214332 A1

L13: Entry 6 of 169

File: PGPB

Oct 28, 2004

PGPUB-DOCUMENT-NUMBER: 20040214332

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040214332 A1

TITLE: Engraftable human neural stem cells

PUBLICATION-DATE: October 28, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Evan, Snyder Y.	La Jolla	CA	US	
Wolfe, John H.	Philadelphia	PA	US	
Kim, Seung U.	Vancouver		CA	

US-CL-CURRENT: 435/456; 435/368

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Drawn Des.
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7. Document ID: US 20040214324 A1

L13: Entry 7 of 169

File: PGPB

Oct 28, 2004

PGPUB-DOCUMENT-NUMBER: 20040214324

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040214324 A1

TITLE: Dopaminergic neurons differentiated from embryonic cells for treating neurodegenerative diseases

PUBLICATION-DATE: October 28, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Isacson, Ole	Cambridge	MA	US	
Bjorklund, Lars	Stockholm		SE	

US-CL-CURRENT: 435/368

ABSTRACT:

Disclosed herein are methods for generating dopaminergic neurons in vitro by inhibiting a pathway component of a TGF-.beta. signaling pathway and overexpressing one or more cell fate-inducing polypeptides in pluripotent cells, causing differentiation of the pluripotent cells into dopaminergic neurons. Also disclosed are methods for treating a neurodegenerative disease in a patient by generating dopaminergic neurons in vitro, and transplanting them into the brain of the patient, such that the dopaminergic neurons are sufficient to reduce or eliminate the symptoms of the neurodegenerative disease.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KWIC	Drawn Des.
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8. Document ID: US 20040208858 A1

L13: Entry 8 of 169

File: PGPB

Oct 21, 2004

PGPUB-DOCUMENT-NUMBER: 20040208858

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040208858 A1

TITLE: Therapeutic uses for mesenchymal stromal cells

PUBLICATION-DATE: October 21, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tennekoon, Gihan	Wynnewood	PA	US	
Coyle, Andrew J.	Phila.	PA	US	
Grinspan, Judith	Ardmore	PA	US	
Beesley, Jackie S.	London		GB	

US-CL-CURRENT: 424/93.21; 435/368

ABSTRACT:

Human mesenchymal stromal cells can be induced to differentiate into oligodendrocytes and neurons, respectively. For these cell types, therefore, MSCs can be a therapeutic source, either *in vitro* or *in vivo*, in the context of treating pathologies of the central nervous system which are characterized by neuron loss, such as Parkinson's disease, Alzheimer's disease and stroke, as well as head trauma, or by dysfunction in ganglioside storage or demyelinization, such as Tay-Sachs disease, G1 gangliosidosis, metachromatic leukodystrophy, and multiple sclerosis.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Drawl Des](#)

9. Document ID: US 20040197317 A1

L13: Entry 9 of 169

File: PGPB

Oct 7, 2004

PGPUB-DOCUMENT-NUMBER: 20040197317

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040197317 A1

TITLE: Persistent expression of candidate molecule in proliferating stem and progenitor cells for delivery of therapeutic products

PUBLICATION-DATE: October 7, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rao, Mahendra S.	Timonium	MD	US	
Capecchi, Mario R.	Salt Lake City	UT	US	

US-CL-CURRENT: 424/93.21; 435/366, 435/455

ABSTRACT:

A method of obtaining and the resulting isolated progenitor or stem cell population of proliferating cells persistently expressing a candidate molecule. Further, novel methods of *ex vivo* gene product (e.g., protein) production and treating symptoms of neurological or neurodegenerative disorders are also provided.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Drawl Des](#)

10. Document ID: US 20040185429 A1

L13: Entry 10 of 169

File: PGPB

Sep 23, 2004

PGPUB-DOCUMENT-NUMBER: 20040185429

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040185429 A1

TITLE: Method for discovering neurogenic agents

PUBLICATION-DATE: September 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kelleher-Andersson, Judith	Columbia	MD	US	
Johe, Karl K.	Potomac	MD	US	

US-CL-CURRENT: 435/4; 435/368**ABSTRACT:**

A method for discovering neurogenic drugs is revealed. The method allows for systematic screening of test agents such as libraries of compounds. The method consists of exposing test agents to cultures of differentiating neural progenitor cells and measuring their effects on increasing the overall cell number and/or the number of neurons.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Drawn Des
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 11. Document ID: US 20040161419 A1

L13: Entry 11 of 169

File: PGPB

Aug 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040161419

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040161419 A1

TITLE: Placental stem cells and uses thereof

PUBLICATION-DATE: August 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Strom, Stephen C.	Allison Park	PA	US	
Miki, Toshio	Pittsburgh	PA	US	

US-CL-CURRENT: 424/93.21; 435/366**ABSTRACT:**

The present invention features novel placental stem cells and provides methods and compositions for the therapeutic uses of placental stem cells or placental stem cells that have been induced to differentiate into a desired tissue type into a recipient host in amounts sufficient to result in production of the desired cell type, e.g., hepatocytes, neural cells, pancreatic cells, vascular endothelial cells, cardiomyocytes.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Drawn Des
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 12. Document ID: US 20040152189 A1

L13: Entry 12 of 169

File: PGPB

Aug 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040152189

PGPUB-FILING-TYPE: new

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

TITLE: Selective antibody targeting of undifferentiated stem cells

PUBLICATION-DATE: August 5, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
McWhir, Jim	Midlothian	CA	GB	
Gold, Joseph D.	San Francisco	CA	US	
Schiff, J. Michael	Menlo Park		US	

US-CL-CURRENT: 435/366; 435/455

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in expression of a cell-surface antigen that can be used to deplete the undifferentiated cells. Model effector sequences encode glycosyl transferases that synthesize carbohydrate xenoantigen or alloantigen, which can be used for immunoseparation or as a target for complement-mediated lysis. The differentiated cell populations produced are suitable for use in tissue regeneration and non-therapeutic applications such as drug screening.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

 13. Document ID: US 20040151701 A1

L13: Entry 13 of 169

File: PGPB

Aug 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040151701

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040151701 A1

TITLE: Method for differentiating mesenchymal stem cells into neural cells

PUBLICATION-DATE: August 5, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kim, Hyun-Soo	Suwon-si, Kyungki-do		KR	
Yoon, Hae-Hoon	Incheon		KR	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

A method for differentiating mesenchymal stem cells of bone marrow into neural cells comprises culturing the mesenchymal stem cells in a medium containing epidermal growth factor(EGF), basic fibroblast growth factor(bFGF) and hepatocyte growth factor(HGF), and the neural cells produced thereby can be employed for the treatment of a

14. Document ID: US 20040137535 A1

L13: Entry 14 of 169

File: PGPB

Jul 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040137535

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040137535 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: July 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Uchida, Nobuko	Palo Alto	CA	US	
Capela, Alexandra	Mountain View	CA	US	

US-CL-CURRENT: 435/7.2; 435/368

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagents that bind to cell surface markers are provided.

15. Document ID: US 20040120932 A1

L13: Entry 15 of 169

File: PGPB

Jun 24, 2004

PGPUB-DOCUMENT-NUMBER: 20040120932

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040120932 A1

TITLE: In vitro-derived adult pluripotent stem cells and uses therefor

PUBLICATION-DATE: June 24, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zahner, Joseph Edward	Saint Louis	MO	US	

US-CL-CURRENT: 424/93.7; 435/366, 435/69.1, 514/50, 514/575

ABSTRACT:

Methods for deriving adult pluripotent stem cells from fully differentiated adult somatic cells by in vitro nuclear remodeling are provided. Cells cultured from a variety of tissue sources are treated in vitro to reverse the tissue specific epigenetic chromosomal changes associated with differentiation. Remodeled cells resemble embryonic stem cells by expressing telomerase and demonstrating pluripotency. The cells can be genetically modified to produce heterologous proteins or to correct for genetic defects. Methods for treating a human by implanting in vitro-derived adult pluripotent stem cells ("NUCREM.TM. cells") and generating engineered tissues for implantation are also disclosed. Advantages to this invention include the non-use of embryos to obtain an unlimited supply of stem cells for therapy and the ability to generate autologous cells and tissues for therapeutic use.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

16. Document ID: US 20040107453 A1

L13: Entry 16 of 169

File: PGPB

Jun 3, 2004

PGPUB-DOCUMENT-NUMBER: 20040107453

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040107453 A1

TITLE: Multipotent adult stem cells, sources thereof, methods of obtaining same, methods of differentiation thereof, methods of use thereof and cells derived thereof

PUBLICATION-DATE: June 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Furcht, Leo T	Minneapolis	MN	US	
Verfaillie, catherine M	St Paul	MN	US	
Reyes, Morayma	Minneapolis	MN	US	

US-CL-CURRENT: 800/18; 424/93.7, 435/353, 435/354, 435/366, 800/21

ABSTRACT:

The present invention relates generally to mammalian multipotent adult stem cells (MASC), and more specifically to methods for obtaining, maintaining and differentiating MASC to cells of multiple tissue types. Uses of MASC in the therapeutic treatment of disease are also provided.

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17. Document ID: US 20040106197 A1

L13: Entry 17 of 169

File: PGPB

Jun 3, 2004

PGPUB-DOCUMENT-NUMBER: 20040106197

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040106197 A1

TITLE: Central nerve system precursor cells inducing synaptogenic neurons in spinal

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

cord

PUBLICATION-DATE: June 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Okano, Hideyuki	Suita-shi		JP	
Ogawa, Yuhto	Kawasa-shi		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention provides central nervous system neural progenitor cells which can induce neurons with synapse forming ability, oligodendrocytes, astrocytes and the like when transplanted into an injured or disabled spinal cord, a method for preparing said central nervous system neural progenitor cells, a method for screening promoters or inhibitors of synapse formation using said central nervous system neural progenitor cells, a therapeutic drug to improve neural injuries or neural functions using said central nervous system neural progenitor cells, and the like. The central nervous system neural progenitor cells comprising neural stem cells derived from the spinal cord and cultured in the presence of cytokine, is transplanted into the injury site at a certain period after the spinal injury. The transplantation can induce neurons with synapse forming ability, oligodendrocytes, and astrocytes in the injury site, resulting in forming synapses between induced neurons and host neurons, and thus the injured spinal cord function is improved.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWD](#) | [Draw. Des.](#)

18. Document ID: US 20040103448 A1

L13: Entry 18 of 169

File: PGPB

May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040103448

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040103448 A1

TITLE: Methods for inducing in vivo proliferation and migration of transplanted progenitor cells in the brain

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bjorklund, Anders	Lund		SE	

US-CL-CURRENT: 800/9; 435/368

ABSTRACT:

The present invention provides methods of inducing in vivo migration and proliferation of progenitor cells transplanted to the brain. Isolation, characterization, proliferation, differentiation and transplantation of mammalian neural stem cells are also disclosed.

19. Document ID: US 20040092013 A1

L13: Entry 19 of 169

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092013

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092013 A1

TITLE: Method of treating alzheimer's disease with cell therapy

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Snyder, Evan Y.	La Jolla	CA	US	
Loring, Jeanne F.	Del Mar	CA	US	
Snable, Gary L.	Atherton	CA	US	
Aboody, Karen S.	Arcadia	CA	US	
Daadi, Marcel M.	Palo Alto	CA	US	

US-CL-CURRENT: 435/368; 424/93.7

ABSTRACT:

A method of treating Alzheimer's disease provides for administering NSC to a susceptible individual. Preferably the NSCs are administered intracisternally. Other administration routes are spinal injection, ventricular injection or systemic injection. Preferably, the quantity of NSC administered is in a range of about 400,000 to about 40,000,000. More preferably, the quantity of NSC is about 1,000,000 to about 10,000,000. The NSCs are administered at multiple locations. The NSCs can be administered to the neocortex or other affected areas of both hemispheres. The method of preventing further deterioration in cognitive function in a person diagnosed with Alzheimer's disease provides for administering NSC to the person in sufficient quantity to prevent additional loss of cognitive function.

 20. Document ID: US 20040092012 A1

L13: Entry 20 of 169

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092012

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092012 A1

TITLE: Process for producing nerve stem cells, motor neurons, and gabaergic neurons from embryonic stem cells

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Okano, Hideyuki	Tokyo		JP	
Shimazaki, Takuya	Tokyo		JP	

US-CL-CURRENT: 435/366

ABSTRACT:

The present invention provides a method for producing motor neurons and GABAergic neurons characterized by including suspension-culturing embryonic stem cells in the presence or absence of a protein noggin to form embryoid bodies, selectively amplifying into neural stem cells from them by suspension culture in the presence of a fibroblast growth factor and a sonic hedgehog protein, and then differentiating the same. According to this method, at least motor neurons and GABAergic neurons can be systemically and efficiently produced from ES cells. Selective acquisition of neurons would be applicable to transplant therapy for amyotrophic lateral sclerosis, Huntington's chorea, Alzheimer's disease, etc.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

21. Document ID: US 20040092010 A1

L13: Entry 21 of 169

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092010

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092010 A1

TITLE: Method of proliferating and inducing brain stem cells to differentiate to neurons

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ruiz I Altaba, Ariel	New York	NY	US	
Alvarez-Buylla, Arturo	San Francisco	CA	US	
Lim, Daniel A.	San Francisco	CA	US	
Dahmane, Nadia	Marseille	NY	FR	
Palma, Veronica	New York		US	.

US-CL-CURRENT: 435/354; 435/368

ABSTRACT:

The present invention discloses methods of producing neuronal cells from stem cells, particularly from adult brain stem cells. The use of such neuronal cells in the treatment and/or prevention of neurological diseases, conditions and/or injuries is also disclosed. In addition, the present invention provides a novel source of neuronal cells for use as a laboratory tool.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

22. Document ID: US 20040072345 A1

L13: Entry 22 of 169

File: PGPB

Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040072345

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040072345 A1

TITLE: Method and compositions for inhibiting tumorigenesis

PUBLICATION-DATE: April 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Altaba, Ariel Ruiz i.	New York	NY	US	
Sanchez, Maria Pilar	New York	NY	US	

US-CL-CURRENT: 435/368; 435/354

ABSTRACT:

The present invention discloses methods of producing neuronal cells from stem cells, particularly from adult brain stem cells. The use of such neuronal cells in the treatment and/or prevention of neurological diseases, conditions and/or injuries is also disclosed. In addition, the present invention provides a novel source of neuronal cells for use as a laboratory tool.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KIND](#) | [Drawn Desc](#)

23. Document ID: US 20040058412 A1

L13: Entry 23 of 169

File: PGPB

Mar 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040058412

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040058412 A1

TITLE: Cell populations which co-express CD49c and CD90

PUBLICATION-DATE: March 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ho, Tony W.	Berwyn	PA	US	
Kopen, Gene C.	Wynnewood	PA	US	
Righter, William F.	Ridley Park	PA	US	
Rutkowski, J. Lynn	Wynnewood	PA	US	
Wagner, Joseph	West Chester	PA	US	
Herring, W. Joseph	Valley Forge	PA	US	
Ragaglia, Vanessa	Newtown Square	PA	US	

US-CL-CURRENT: 435/69.1; 424/93.7, 435/320.1, 435/325, 435/366

ABSTRACT:

Substantially homogenous cells populations which co-express CD49c, CD90 and telomerase are made. In one embodiment, humans suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition are treated with the substantially homogenous cells populations which co-express CD49c, CD90 and telomerase. In another embodiment, committed progenitor cells are made by selecting from a cultured source of a cell population which co-express CD49c and CD90 and modifying the cell population. The committed progenitor cells can be employed to treat a human suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition and to formulate pharmaceutical compositions. In a further embodiment, a substantially homogenous population of cells which co-express CD49c, CD90 and at least one cardiac-related transcription factor is made and can be used to treat a human suffering from a cardiac condition.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KWIC	Draw. Desc
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24. Document ID: US 20040033597 A1

L13: Entry 24 of 169

File: PGPB

Feb 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040033597

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040033597 A1

TITLE: Multipotent neural stemcells from peripheral tissues and uses thereof

PUBLICATION-DATE: February 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Toronto Ontario		CA	
Akhavan, Mahnaz	Toronto Ontario		CA	
Fernandes, Karl J. L.	Toronto Ontario		CA	
Fortier, Mathieu	Orford		CA	
Miller, Freda	Toronto Ontario		CA	
Golster, Andrew	Saskatoon Saskatchewan		CA	

US-CL-CURRENT: 435/368; 435/371

ABSTRACT:

This invention relates to multipotent neural stem cells, purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KWIC	Draw. Desc
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25. Document ID: US 20040033214 A1

L13: Entry 25 of 169

File: PGPB

Feb 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040033214

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040033214 A1

TITLE: Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

PUBLICATION-DATE: February 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Young, Henry E.	Macon	GA	US	
Lucas, Paul A.	Poughkeepsie	NY	US	

US-CL-CURRENT: 424/93.7; 435/366, 435/368

ABSTRACT:

The present invention relates to pluripotent stem cells, particularly to pluripotent embryonic-like stem cells. The invention further relates to methods of purifying pluripotent embryonic-like stem cells and to compositions, cultures and clones thereof. The present invention also relates to a method of transplanting the pluripotent stem cells of the present invention in a mammalian host, such as human, comprising introducing the stem cells, into the host. The invention further relates to methods of in vivo administration of a protein or gene of interest comprising transfecting a pluripotent stem cell with a construct comprising DNA which encodes a protein of interest and then introducing the stem cell into the host where the protein or gene of interest is expressed. The present also relates to methods of producing mesodermal, endodermal or ectodermal lineage-committed cells by culturing or transplantation of the pluripotent stem cells of the present invention.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [RQMC](#) | [Draw. Desc.](#)

26. Document ID: US 20040029269 A1

L13: Entry 26 of 169

File: PGPB

Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040029269

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040029269 A1

TITLE: Promoter-based isolation, purification, expansion, and transplantation of neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells from a population of embryonic stem cells

PUBLICATION-DATE: February 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Roy, Neeta Singh	New York	NY	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to a method of isolating neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells from a population of embryonic stem cells. This method comprises selecting a promoter which functions only in neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells and introducing a nucleic acid molecule encoding a marker protein under control of said promoter into the population of embryonic stem cells. The population of embryonic stem cells are then differentiated to produce a mixed population of cells comprising neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells. The neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells are then allowed to express the marker protein. Cells expressing the marker protein are separated from the mixed population of cells, where the separated cells are neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells. In an alternative embodiment, the embryonic stem cells are differentiated before the nucleic acid is introduced. The present invention also relates to the resulting neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells themselves.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw. Desc.](#)

27. Document ID: US 20040014210 A1

L13: Entry 27 of 169

File: PGPB

Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040014210

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040014210 A1

TITLE: Methods for inducing differentiation of embryonic stem cells and uses thereof

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jessell, Thomas M.	Bronx	NY	US	
Wichterle, Hynek	New York	NY	US	
Lieberam, Ivo	New York	NY	US	

US-CL-CURRENT: 435/368; 435/354, 514/12, 514/559

ABSTRACT:

The present invention provides a method for inducing differentiation of an embryonic stem cell into a differentiated neural cell. The present invention further provides a method for producing differentiated neural cells, and a population of cells comprising the differentiated neural cells. Additionally, the present invention provides a method for repopulating a spinal cord in a subject, and a method for treating nervous tissue degeneration in a subject in need of treatment. The present invention further provides neural progenitor cells, differentiated neural cells, and uses of same. Also provided is a transgenic non-human animal containing the differentiated neural cells. The present invention is further directed to a method for isolating a population of differentiated neural cells. Finally, the present invention provides a method for identifying an agent for use in treating a condition associated with neuron degeneration.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw. Desc.](#)

28. Document ID: US 20040009593 A1

L13: Entry 28 of 169

File: PGPB

Jan 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040009593

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040009593 A1

TITLE: Oligodendrocytes derived from human embryonic stem cells for remyelination and treatment of spinal cord injury

PUBLICATION-DATE: January 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Keirstead, Hans S.	Irvine	CA	US	
Nistor, Gabriel I.	Placentia	CA	US	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention provides populations of neural cells bearing markers of glial cells, such as oligodendrocytes and their precursors. The populations are generated by differentiating pluripotent stem cells such as human embryonic stem cells under conditions that promote enrichment of cells with the desired phenotype or functional capability. Various combinations of differentiation factors and mitogens can be used to produce cell populations that are over 95% homogeneous in morphological appearance, and the expression of oligodendrocyte markers such as GalC. The cells are capable of forming myelin sheaths, and can be used therapeutically improve function of the central nervous system.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

29. Document ID: US 20040005704 A1

L13: Entry 29 of 169

File: PGPB

Jan 8, 2004

PGPUB-DOCUMENT-NUMBER: 20040005704

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040005704 A1

TITLE: Low oxygen culturing of central nervous system progenitor cells

PUBLICATION-DATE: January 8, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Csete, Marie	Ann Arbor	MI	US	
Doyle, John	South Pasadena	CA	US	
Wold, Barbara J.	San Marino	CA	US	
McKay, Ron	Bethesda	MD	US	
Studer, Lorenz	New York	NY	US	

ABSTRACT:

The present invention relates to the growth of cells in culture under conditions that promote cell survival, proliferation, and/or cellular differentiation. The present inventors have found that proliferation was promoted and apoptosis reduced when cells were grown in lowered oxygen as compared to environmental oxygen conditions traditionally employed in cell culture techniques. Further, the inventors found that differentiation of precursor cells to specific fates also was enhanced in lowered oxygen where a much greater number and fraction of dopaminergic neurons were obtained when mesencephalic precursors were expanded and differentiated in lowered oxygen conditions. Thus at more physiological oxygen levels the proliferation and differentiation of CNS precursors is enhanced, and lowered oxygen is a useful adjunct for ex vivo generation of specific neuron types. Methods and compositions exploiting these findings are described.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMMIC](#) | [Drawn Des](#)

30. Document ID: US 20040005661 A1

L13: Entry 30 of 169

File: PGPB

Jan 8, 2004

PGPUB-DOCUMENT-NUMBER: 20040005661

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040005661 A1

TITLE: Potential growth factors from the human tumour cell line ht 1080

PUBLICATION-DATE: January 8, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Minger, Stephen L.	London		GB	
Adams, Gregor	London		GB	
Francis, Paul	London		GB	
Mcclure, Myra	London		GB	

US-CL-CURRENT: 435/69.1; 435/226, 435/320.1, 435/366, 530/350, 536/23.2

ABSTRACT:

The invention relates to a mitogen obtainable from a human tumour cell line, such as from HT1080 cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMMIC](#) | [Drawn Des](#)

31. Document ID: US 20030226159 A1

L13: Entry 31 of 169

File: PGPB

Dec 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030226159

PGPUB-FILING-TYPE: new

TITLE: Cancer models

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bachoo, Robert M.	Roslindale	MA	US	
Depinho, Ronald A.	Brookline	MA	US	

US-CL-CURRENT: 800/18; 435/354

ABSTRACT:

The invention provides chimeric non-human animals, methods for making and using chimeric non-human animals, isolated stem cells, and methods for identifying agents that reduces cancer in a non-human animal. For example, the invention relates to using stem cells to make chimeric non-human animals having cancer or the ability to develop cancer. Such animals can be used to evaluate tumorigenesis, tumor maintenance, and tumor regression in vivo. In addition, the chimeric non-human animals provided herein can be used to identify agents that reduce or prevent tumor formation or growth in vivo.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KWIC	Draw. Des.
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 32. Document ID: US 20030224345 A1

L13: Entry 32 of 169

File: PGPB

Dec 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030224345

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030224345 A1

TITLE: Screening assays for identifying differentiation-inducing agents and production of differentiated cells for cell therapy

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
West, Michael D.	Southborough	MA	US	
Page, Raymond	Southbridge	MA	US	
Scholer, Hans	Kennett Square	PA	US	
Chapman, Karen	SouthBorough	MA	US	

US-CL-CURRENT: 435/4; 435/350, 435/351, 435/353, 435/354, 435/366

ABSTRACT:

The invention relates to assays for screening growth factors, adhesion molecules, immunostimulatory molecules, extracellular matrix components and other materials, alone or in combination, simultaneously or temporally, for the ability to induce directed differentiation of pluripotent and multipotent stem cells.

33. Document ID: US 20030223972 A1

L13: Entry 33 of 169

File: PGPB

Dec 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030223972

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030223972 A1

TITLE: Myelination of congenitally dysmyelinated forebrains using oligodendrocyte progenitor cells

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Roy, Neeta Singh	New York	NY	US	
Windrem, Martha	New York	NY	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/456, 435/458, 435/459

ABSTRACT:

One form of the present invention is directed to a method of remyelinating demyelinated axons by treating the demyelinated axons with oligodendrocyte progenitor cells under conditions which permit remyelination of the axons. Another aspect of the present invention relates to a method of treating a subject having a condition mediated by a loss of myelin or a loss of oligodendrocytes by administering to the subject oligodendrocyte progenitor cells under conditions effective to treat the condition mediated by a loss of myelin or a loss of oligodendrocytes. A further aspect of the present invention relates to an in vitro method of identifying and separating oligodendrocyte progenitor cells from a mixed population containing other mammalian brain or spinal cord cell types. This further aspect of the present invention involves removing neurons and neuronal progenitor cells from the mixed population to produce a treated mixed population. Oligodendrocyte progenitor cells are then separated from the treated mixed population to form an enriched population of oligodendrocyte progenitor cells.

34. Document ID: US 20030219898 A1

L13: Entry 34 of 169

File: PGPB

Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030219898

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030219898 A1

TITLE: Novel mammalian multipotent stem cells and compositions, methods of preparation and methods of administration thereof

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sugaya, Kiminobu	Willow Springs	IL	US	
Qu, Tingyu	Chicago	IL	US	
Vaghani, Ankur V.	Chicago	IL	US	
Brannen, Christopher	Vancouver	WA	US	
Kim, Hojoong M.	Chicago	IL	US	
Pulido, Jose S.	Brookfield	WI	US	
Dong, Xiajing	Oak Park	IL	US	

US-CL-CURRENT: 435/455; 435/366

ABSTRACT:

This invention provides methods for preparing novel mammalian multipotent stem cells (MSCs), compositions thereof, and methods of preparing and administering the cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWD](#) | [Draw Des](#)

35. Document ID: US 20030211603 A1

L13: Entry 35 of 169

File: PGPB

Nov 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030211603

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030211603 A1

TITLE: Reprogramming cells for enhanced differentiation capacity using pluripotent stem cells

PUBLICATION-DATE: November 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Earp, David J.	Oakland	CA	US	
Carpenter, Melissa K.	Castro Valley	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Lebkowski, Jane S.	Portola Valley	CA	US	
Schiff, J. Michael	Menlo Park	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

Described in this disclosure is a new process whereby cells of one tissue type can be reprogrammed to produce cells of a different tissue type. Cells from a human donor are reprogrammed by culturing adjacent to primate pluripotent stem cells (in an undifferentiated or newly differentiated state) or in an environment supplemented by components taken from pPS cells. Simultaneously or in a subsequent step, the donor cells can be treated in a manner that enhances differentiation towards a different tissue type. In this manner, patients in need of tissue regeneration can be treated with cells differentiated and reprogrammed from their own autologous cell donation.

36. Document ID: US 20030211087 A1

L13: Entry 36 of 169

File: PGPB

Nov 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030211087

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030211087 A1

TITLE: Neutral progenitor cells from hippocampal tissue and a method for isolating and purifying them

PUBLICATION-DATE: November 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/456

ABSTRACT:

The present invention relates to an enriched or purified preparation of isolated hippocampal neural progenitor cells and progeny thereof. The present invention also relates to a method of separating neural progenitor cells from a mixed population of cell types from hippocampal tissue. This method includes selecting a promoter which functions selectively in the neural progenitor cells, introducing a nucleic acid molecule encoding a fluorescent protein under control of said promoter into all cell types of the mixed population of cell types from hippocampal tissue, allowing only the neural progenitor cells, but not other cell types, within the mixed population to express said fluorescent protein, identifying cells of the mixed population of cell types that are fluorescent, which are restricted to the neural progenitor cells, and separating the fluorescent cells from the mixed population of cell types, wherein the separated cells are restricted to the neural progenitor cells.

37. Document ID: US 20030207450 A1

L13: Entry 37 of 169

File: PGPB

Nov 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030207450

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030207450 A1

TITLE: Isolation and transplantation of retinal stem cells

PUBLICATION-DATE: November 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Young, Michael J.	Gloucester	MA	US	
Klassen, Henry J.	Pasadena	CA	US	

Shatos, Marie A.

Athol

MA

US

Mizumoto, Keiko

Higashi

JP

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to the isolation, in vitro propagation, and transplantation and integration of non-pigmented retinal stem cells derived from the neuroretina of the eye, ex vivo and in vivo.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

38. Document ID: US 20030166276 A1

L13: Entry 38 of 169

File: PGPB

Sep 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030166276

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030166276 A1

TITLE: Cultures of human CNS neural stem cells

PUBLICATION-DATE: September 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa	Foster City	CA	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The invention provides a cell culture including proliferating human neural stem cells with a doubling rate faster than thirty days. The invention also provides a cell culture media for proliferating mammalian neural cells including a standard defined culture medium, a carbohydrate source, a buffer, a source of hormones, one or more growth factors that stimulate the proliferation of neural stem cells, and LIF. The invention also provides a method for protecting, repairing or replacing damaged tissue comprising transplanting mammalian neural stem cells formed into neurospheres. The invention also provides a cell culture of differentiated human neural stem cells where the cells are glioblasts. The invention also provides a method of differentiating human neural stem cells in culture media.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

39. Document ID: US 20030161818 A1

L13: Entry 39 of 169

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030161818

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030161818 A1

TITLE: Cultures, products and methods using stem cells

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Mark L.	Manhattan	KS	US	
Troyer, Deryl L.	Manhattan	KS	US	
Davis, Duane	Westmoreland	KS	US	
Mitchell, Kathy E.	Manhattan	KS	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/372, 514/44

ABSTRACT:

Stem cells from human sources can have a variety of useful applications in disease treatment and biotechnology. More particularly the umbilical cord matrix stem (UCMS) cell cultures of the invention have a variety of totipotent, pluripotent, or multipotent cells for a variety of end uses from a non-controversial, universally available, species-specific source. The technology can have application to any placental animal, including agricultural and laboratory animals and humans. The invention relates to isolating, culturing the stem cells, maintaining the stem cells, transforming the stem cells into useful cell types using genetic or other transformation technologies, stem cell and tissue banking and using untransformed or transformed cells in disease treatment.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

40. Document ID: US 20030161817 A1

L13: Entry 40 of 169

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030161817

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030161817 A1

TITLE: Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Young, Henry E.	Macon	GA	US	
Lucas, Paul A.	Poughkeepsie	NY	US	

US-CL-CURRENT: 424/93.21; 435/366

ABSTRACT:

The present invention relates to pluripotent stem cells, particularly to pluripotent embryonic-like stem cells. The invention further relates to methods of purifying pluripotent embryonic-like stem cells and to compositions, cultures and clones thereof. The present invention also relates to a method of transplanting the pluripotent stem cells of the present invention in a mammalian host, such as human, comprising introducing the stem cells, into the host. The invention further relates

to methods of in vivo administration of a protein or gene of interest comprising transfecting a pluripotent stem cell with a construct comprising DNA which encodes a protein of interest and then introducing the stem cell into the host where the protein or gene of interest is expressed. The present also relates to methods of producing mesodermal, endodermal or ectodermal lineage-committed cells by culturing or transplantation of the pluripotent stem cells of the present invention.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KOMC	Drawn Desc
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41. Document ID: US 20030148515 A1

L13: Entry 41 of 169

File: PGPB

Aug 7, 2003

PGPUB-DOCUMENT-NUMBER: 20030148515
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030148515 A1

TITLE: Generation of hematopoietic cells from multipotent neutral stem cells

PUBLICATION-DATE: August 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bjornson, Christopher R.	Calgary		CA	
Rietze, Rod L.	Calgary		CA	
Reynolds, Brent A.	Saltspring		CA	
Vescovi, Angelo L.	Milan		IT	

US-CL-CURRENT: 435/368; 435/372

ABSTRACT:

Multipotent neural stem cell (MNSC) progeny are induced to generate cells of the hematopoietic system by placing the MNSC progeny in a hematopoietic-inducing environment. The hematopoietic-inducing environment can be either ex vivo or in vivo. A mammal's circulatory system provides an in vivo environment that can induce xenogeneic, allogeneic, or autologous MNSC progeny to generate a full complement of hematopoietic cells. Transplantation of MNSC progeny provides an alternative to bone marrow and hematopoietic stem cell transplantation to treat blood-related disorders.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KOMC	Drawn Desc
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42. Document ID: US 20030148513 A1

L13: Entry 42 of 169

File: PGPB

Aug 7, 2003

PGPUB-DOCUMENT-NUMBER: 20030148513
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030148513 A1

TITLE: Novel mammalian multipotent neural stem cells and compositions, methods of preparation and methods of administration thereof

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sugaya, Kiminobu	Willow Springs	IL	US	
Qu, Tingyu	Chicago	IL	US	
Pulido, Jose S.	Brookfield	WI	US	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to novel mammalian multipotent neural stem cells (MNSCs), compositions thereof, and methods of preparing and administering the cells to diseased, aged or damaged tissue such that the cells properly migrate and differentiate and a neurological or corporal deficit is improved or remedied as a result.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Drawn Des.
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 43. Document ID: US 20030134413 A1

L13: Entry 43 of 169

File: PGPB

Jul 17, 2003

PGPUB-DOCUMENT-NUMBER: 20030134413

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030134413 A1

TITLE: Cell production

PUBLICATION-DATE: July 17, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rathjen, Peter David	Mircham		AU	
Rathjen, Joy	Mircham		AU	

US-CL-CURRENT: 435/368

ABSTRACT:

A method of producing neurectoderm cells, which method includes providing a source of early primitive ectoderm-like (EPL) cells; a conditioned medium as hereinbefore defined; or an extract therefrom exhibiting neural inducing properties; and contacting the EPL cells with the conditioned medium, for a time sufficient to generate controlled differentiation to neurectoderm cells.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMC	Drawn Des.
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 44. Document ID: US 20030118566 A1

L13: Entry 44 of 169

File: PGPB

Jun 26, 2003

PGPUB-DOCUMENT-NUMBER: 20030118566
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030118566 A1

TITLE: Compositions and methods for isolation, propagation, and differentiation of human stem cells and uses thereof

PUBLICATION-DATE: June 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Neuman, Toomas	Santa Monica	CA	US	
Levesque, Michel	Beverly Hills	CA	US	

US-CL-CURRENT: 424/93.21; 424/93.7, 435/368

ABSTRACT:

The invention is directed to the field of human stem cells and includes methods and compositions for isolating, propagating, and differentiating human stem cells. The invention provides therapeutic uses of the methods and compositions, including autologous transplantation of treated cells into humans for treatment of Parkinson's and other neuronal disorders.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

45. Document ID: US 20030109039 A1

L13: Entry 45 of 169

File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109039
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030109039 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Buck, David W.	Heathfield	CA	GB	
Uchida, Nobuko	Palo Alto	CA	US	
Weissman, Irving	Redwood City		US	

US-CL-CURRENT: 435/368; 435/7.21

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

46. Document ID: US 20030109037 A1

L13: Entry 46 of 169

File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109037
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030109037 A1

TITLE: Methods for application of genetically-modified endogenous or exogenous stem/progenitor or their progeny for treatment of disease

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reid, Christopher Brian	Alexandria	VA	US	
Pack, Svetlana	Gaithersburg	MD	US	

US-CL-CURRENT: 435/366

ABSTRACT:

We propose here that endogenous stem/progenitor cells of the developing or adult nervous system be genetically modified *in situ*, to express therapeutically advantageous gene products. Furthermore, we propose here that endogenous or other exogenous stem cells or their progeny be genetically modified when appropriate to express advantageous gene products (and/or modified through culture techniques), and that, if exogenously derived, they be transplanted into the ventricular system of the patient nervous system, the germinal zone of the ventricular system, into postmitotic regions of the CNS or other organs.

 47. Document ID: US 20030109008 A1

L13: Entry 47 of 169

File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109008
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030109008 A1

TITLE: Methods of making cDNA libraries

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

ABSTRACT:

The invention discloses methods of proliferation and differentiation of multipotent neural stem cells. Also provided are methods of making cDNA libraries and methods of screening biological agents which affect proliferation differentiation survival phenotype or function of CNS cells.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KVNC	Draw Desc
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48. Document ID: US 20030104619 A1

L13: Entry 48 of 169

File: PGPB

Jun 5, 2003

PGPUB-DOCUMENT-NUMBER: 20030104619
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030104619 A1

TITLE: Hypoxia-mediated neurogenesis

PUBLICATION-DATE: June 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

US-CL-CURRENT: 435/377

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KVNC	Draw Desc
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49. Document ID: US 20030103949 A1

L13: Entry 49 of 169

File: PGPB

Jun 5, 2003

PGPUB-DOCUMENT-NUMBER: 20030103949
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030103949 A1

TITLE: Screening small molecule drugs using neural cells differentiated from human embryonic stem cells

PUBLICATION-DATE: June 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Denham, Jerrod J.	San Francisco	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Thies, R. Scott	Pleasanton	CA	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/4**ABSTRACT:**

This invention provides populations of neural progenitor cells and differentiated neurons, obtained by culturing pluripotent cells in special growth cocktails. The technology can be used to produce progenitors that proliferate through at least about .40 doublings, while maintaining the ability to differentiate into a variety of different neural phenotypes, including dopaminergic neurons. The neural progenitors and terminally differentiated neurons of this invention can be generated in large quantities for use in drug screening and the treatment of neurological disorders.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Draw. Des.
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 50. Document ID: US 20030095956 A1

L13: Entry 50 of 169

File: PGPB

May 22, 2003

PGPUB-DOCUMENT-NUMBER: 20030095956

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030095956 A1

TITLE: Methods of proliferating undifferentiated neural cells

PUBLICATION-DATE: May 22, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 424/93.21; 435/368**ABSTRACT:**

The invention discloses methods of proliferation and differentiation of multipotent neural stem cells. Also provided are methods of making cDNA libraries and methods of screening biological agents which affect proliferation differentiation survival phenotype or function of CNS cells.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Draw. Des.
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51. Document ID: US 20030092176 A1

L13: Entry 51 of 169

File: PGPB

May 15, 2003

PGPUB-DOCUMENT-NUMBER: 20030092176

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030092176 A1

TITLE: Ependymal neural stem cells and method for their isolation

PUBLICATION-DATE: May 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Janson, Ann Marie	Stockholm	MA	SE	
Frisen, Jonas	Stockholm		SE	
Johansson, Clas	Stockholm		SE	
Momma, Stefan	Spinga		SE	
Clarke, Diana	Cambridge		US	
Zhao, Ming	Solna		SE	
Lendahl, Urban	Stockholm		SE	
Delfani, Kioumars	Solna		SE	

US-CL-CURRENT: 435/368

ABSTRACT:

The invention relates to an ependymal neural CNS stem cell, which cell expresses the surface protein Notch 1 together with at least one surface protein chosen from the group of Notch 2, Notch 3, CAR (transmembrane protein binding adenovirus) and CFTR cystic fibrosis transmembrane conductance regulator), and which cell also comprises at least one cilium. The invention also relates to preparations, including pharmaceutical preparations, comprising ependymal neural CNS stem cells, *in vitro* and *in vivo* assays based thereon and various other uses of the novel ependymal cells according to the invention.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

52. Document ID: US 20030082802 A1

L13: Entry 52 of 169

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082802

PGPUB-FILING-TYPE: original-publication-amended

DOCUMENT-IDENTIFIER: US 20030082802 A1

TITLE: METHOD FOR NEURAL STEM CELL DIFFERENTIATION USING 5HT1A AGONISTS

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rajan , Prithi	Rockville	Maryland	US	
Altar , C. Anthony	Garrett Park	Maryland	US	

ABSTRACT:

The present invention relates to a method for differentiating a neural stem cell into a neuronal cell such as a neuroblast or a neuron *in vitro* or *in vivo*. Particularly, the invention provides for a method for neural stem cell differentiation by contacting the neural stem cell with a 5HT1A ligand or agonist.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWD](#) | [Draw. Desc](#)

53. Document ID: US 20030082515 A1

L13: Entry 53 of 169

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082515..

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082515 A1

TITLE: Methods of screening biological agents

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

The invention discloses methods of proliferation and differentiation of multipotent neural stem cells. Also provided are methods of making cDNA libraries and methods of screening biological agents which affect proliferation differentiation survival phenotype or function of CNS cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWD](#) | [Draw. Desc](#)

54. Document ID: US 20030082160 A1

L13: Entry 54 of 169

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082160

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082160 A1

TITLE: Differentiation of whole bone marrow

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yu, John S.	Los Angeles	CA	US	
Kabos, Peter	Los Angeles	CA	US	
Ehtesham, Moneeb	Los Angeles	CA	US	

US-CL-CURRENT: 424/93.21; 435/368**ABSTRACT:**

A method is described for generating a clinically significant volume of neural progenitor cells from whole bone marrow. A mass of bone marrow cells may be grown in a culture supplemented with fibroblast growth factor-2 (FGF-2) and epidermal growth factor (EGF). Further methods of the present invention are directed to utilizing the neural progenitor cells cultured in this fashion in the treatment of various neuropathological conditions, and in targeting delivery of cells transfected with a particular gene to diseased or damaged tissue.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Drawn Des.
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 55. Document ID: US 20030082155 A1

L13: Entry 55 of 169

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082155

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082155 A1

TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Habener, Joel F.	Newton Centre	MA	US	
Zulewski, Henryk	Basel	MA	CH	
Thomas, Melissa K.	Boston	MA	US	
Abraham, Elizabeth J.	Quincy	MA	US	
Vallejo, Mario	Madrid	MA	ES	
Leech, Colin A.	Boston	MA	US	
Nolan, Anna Louise	Brookline	MA	US	
Lechner, Andreas	Boston	MA	US	

US-CL-CURRENT: 424/93.21; 435/366**ABSTRACT:**

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin and ABCG2 have been identified as molecular markers for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described

whereby nestin and/or ABCG2-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

56. Document ID: US 20030082152 A1

L13: Entry 56 of 169

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082152

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082152 A1

TITLE: Adipose-derived stem cells and lattices

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hedrick, Marc H.	Encino	CA	US	
Katz, Adam J.	Charlottesville	VA	US	
Llull, Ramon	Mallorca	PA	ES	
Futrell, J. William	Pittsburgh	CA	US	
Benhaim, Prosper	Encino	CA	US	
Lorenz, Hermann Peter	Belmont	CA	US	
Zhu, Min	Los Angeles		US	

US-CL-CURRENT: 424/93.21; 435/366

ABSTRACT:

The present invention provides adipose-derived stem cells (ADSCs), adipose-derived stem cell-enriched fractions (ADSC-EF) and adipose-derived lattices, alone and combined with the ADSCs of the invention. In one aspect, the present invention provides an ADSC substantially free of adipocytes and red blood cells and clonal populations of connective tissue stem cells. The ADSCs can be employed, alone or within biologically-compatible compositions, to generate differentiated tissues and structures, both *in vivo* and *in vitro*. Additionally, the ADSCs can be expanded and cultured to produce molecules such as hormones, and to provide conditioned culture media for supporting the growth and expansion of other cell populations. In another aspect, the present invention provides a adipose-derived lattice substantially devoid of cells, which includes extracellular matrix material from adipose tissue. The lattice can be used as a substrate to facilitate the growth and differentiation of cells, whether *in vivo* or *in vitro*, into anlagen or even mature tissues or structures.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

57. Document ID: US 20030059939 A1

L13: Entry 57 of 169

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030059939

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030059939 A1

TITLE: Trans-differentiation and re-differentiation of somatic cells and production of cells for cell therapies

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Page, Raymond	Southbridge	MA	US	
Dominko, Tanja	Southbridge	MA	US	
Malcuit, Christopher	Hudson	MA	US	

US-CL-CURRENT: 435/366; 435/368, 435/372

ABSTRACT:

The invention provides a method for effecting the trans-differentiation of a somatic cell, i.e., the conversion of a somatic cell of one cell type into a somatic cell of a different cell type. The method is practiced by culturing a somatic cell in the presence of at least one agent selected from the group consisting of (a) cytoskeletal inhibitors and (b) inhibitors of acetylation, and (c) inhibitors of methylation, and also culturing the cell in the presence of agents or conditions that induce differentiation to a different cell type. The method is useful for producing histocompatible cells for cell therapy.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

58. Document ID: US 20030059414 A1

L13: Entry 58 of 169

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030059414

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030059414 A1

TITLE: Cell populations which co-express CD49c and CD90

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ho, Tony W.	Berwyn	PA	US	
Kopen, Gene C.	Wynnewood	PA	US	
Righter, William F.	Ridley Park	PA	US	
Rutkowski, J. Lynn	Wynnewood	PA	US	
Wagner, Joseph	West Chester	PA	US	

ABSTRACT:

Substantially homogenous cells populations which co-express CD49c, CD90 and telomerase are made. In one embodiment, humans suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition are treated with the substantially homogenous cells populations which co-express CD49c, CD90 and telomerase. In another embodiment, committed progenitor cells are made by selecting from a cultured source of a cell population which co-express CD49c and CD90 and modifying the cell population. The committed progenitor cells can be employed to treat a human suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition and formulate pharmaceutical compositions.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

 59. Document ID: US 20030049838 A1

L13: Entry 59 of 169

File: PGPB

Mar 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030049838

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030049838 A1

TITLE: Combined regulation of neural cell production

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Thompson, Bradley G.	Calgary		CA	
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to a method of selectively producing neural cells, including neurons or glial cells, *in vitro* or *in vivo*. Also provided are methods of treating or ameliorating neurodegenerative disease or medical conditions by producing neural cells. Thus, a combination of factors is used to achieve two steps: increasing the number of neural stem cells and instructing the neural stem cells to selectively become neurons or glial cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

 60. Document ID: US 20030049837 A1

L13: Entry 60 of 169

File: PGPB

Mar 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030049837

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030049837 A1

TITLE: In vitro and in vivo proliferation and use of multipotent neural stem cells and their progeny

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 435/368; 435/384

ABSTRACT:

Nucleic acids may be obtained from neural cell cultures produced by using growth factors to induce the proliferation of multipotent neural stem cells. The resultant progeny may be passaged repeatedly to produce a sufficient number of cells to obtain representative nucleic acid samples. Clonal cultures may be produced. Nucleic acids may be obtained from both cultured normal and dysfunctional neural cells and from neural cell cultures at various stages of development. This information allows for the identification of the sequence of gene expression during neural development and can be used to reveal the effects of biological agents on gene expression in neural cells. Additionally, nucleic acids derived from dysfunctional tissue can be compared with that of normal tissue to identify genetic material which may be the cause of the dysfunction. This information could then be used in the design of therapies to treat the neurological disorder. A further use of the technology would be in the diagnosis of genetic disorders or for use in identifying neural cells at a particular stage in development.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KUMC](#) | [Drawn Desc](#)

61. Document ID: US 20030049234 A1

L13: Entry 61 of 169

File: PGPB

Mar 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030049234

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030049234 A1

TITLE: DISCOVERY, LOCALIZATION, HARVEST, AND PROPAGATION OF AN FGF2 AND BDNF- RESPONSIVE POPULATION OF NEURAL AND NEURONAL PROGENITOR CELLS IN THE ADULT HUMAN FOREBRAIN

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
GOLDMAN, STEVEN A.	SOUTH SALEM	NY	US	
NEDERGAARD, MAIKEN	SOUTH SALEM	NY	US	

US-CL-CURRENT: 424/93.21; 435/368

ABSTRACT:

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

The present invention provides neuronal progenitor cells which have been identified in histological sections of the adult human brain. The present invention also provides methods to localize, characterize, harvest, and propagate neuronal progenitor cells derived from human brain tissue. Additional methods are provided for introducing and expressing genes in the brain.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

62. Document ID: US 20030040111 A1

L13: Entry 62 of 169

File: PGPB

Feb 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030040111

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030040111 A1

TITLE: Differentiated cells suitable for human therapy

PUBLICATION-DATE: February 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gold, Joseph D.	San Francisco	CA	US	
Lebkowski, Jane S.	Portola Valley	CA	US	

US-CL-CURRENT: 435/368; 435/366, 435/370

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in depletion of undifferentiated cells, or expression of a marker that can be used to remove them later. Suitable effector sequences encode a toxin, a protein that induces apoptosis, a cell-surface antigen, or an enzyme (such as thymidine kinase) that converts a prodrug into a substance that is lethal to the cell. The differentiated cell populations produced according to this disclosure are suitable for use in tissue regeneration, and non-therapeutic applications such as drug screening.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

63. Document ID: US 20030040023 A1

L13: Entry 63 of 169

File: PGPB

Feb 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030040023

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030040023 A1

TITLE: Isolation of neural stem cells using gangliosides and other surface markers

PUBLICATION-DATE: February 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Klassen, Henry	Pasadena	CA	US	
Schwartz, Michael	Garden Grove	CA	US	
Young, Michael J.	Gloucester	MA	US	

US-CL-CURRENT: 435/7.21; 435/368**ABSTRACT:**

During the growth and study of NSCs, a range of molecules present on the surface of multipotent neural stem and progenitor cells (NSCs) were identified. These markers were identified using a number of human and murine neural stem cell lines, including retinal stem cells (RSCs). The NSC-specific markers identified included gene products as well as non-protein molecules and sugar epitopes not directly coded in the genome. Together with surface markers which were determined to be absent from the surface of hNSCs, the molecules described herein provide a means to enrich for neural stem cells, or neural progenitor subpopulations, particularly using combinatorial cell sorting strategies. These same molecules also represent targets for pharmacological manipulation of NSC populations and subpopulations, both *in vivo* and *ex vivo*. Furthermore, these molecules provide potential targets for therapeutic manipulation of other neural precursor-related cell types including malignant conditions as well as other diseases originating from, or preferentially affecting, various uncommitted or replication-competent cell types.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

 64. Document ID: US 20030036195 A1

L13: Entry 64 of 169

File: PGPB

Feb 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030036195

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030036195 A1

TITLE: Generation of differentiated tissue from nuclear transfer embryonic stem cells and methods of use

PUBLICATION-DATE: February 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Studer, Lorenz	New York	NY	US	
Tabar, Viviane	New York	NY	US	
Mombaerts, Peter	New York	NY	US	
Wakayama, Teruhiko	Chuou-ku		JP	
Perry, Anthony	Chuou-ku		JP	

US-CL-CURRENT: 435/368**ABSTRACT:**

The present invention provides methods of preparing mammalian cells and tissues for therapeutic and diagnostic purposes that are derived from ntES cells. The present invention further provides the mammalian cells and tissues themselves. In addition,

methods of using the mammalian cells and tissues as a therapeutic agent or as a diagnostic are provided.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Drawn Des
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65. Document ID: US 20030032187 A1

L13: Entry 65 of 169

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030032187

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030032187 A1

TITLE: Selective antibody targeting of undifferentiated stem cells

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
McWhir, Jim	Midlothian	CA	GB	
Gold, Joseph D.	San Francisco	CA	US	
Schiff, J. Michael	Menlo Park		US	

US-CL-CURRENT: 435/455; 435/366

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in expression of a cell-surface antigen that can be used to deplete the undifferentiated cells. Model effector sequences encode glycosyl transferases that synthesize carbohydrate xenoantigen or alloantigen, which can be used for immunoseparation or as a target for complement-mediated lysis. The differentiated cell populations produced are suitable for use in tissue regeneration and non-therapeutic applications such as drug screening.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KMPC	Drawn Des
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66. Document ID: US 20030032181 A1

L13: Entry 66 of 169

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030032181

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030032181 A1

TITLE: Production of radial glial cells

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary	CA	CA	
Gregg, Christopher	Calgary	CA	CA	

US-CL-CURRENT: 435/368**ABSTRACT:**

The present invention relates to a method of producing radial glial cells from neural stem cells, particularly by contacting neural stem cells with epidermal growth factor (EGF), fibroblast growth factor 2 (FGF-2) and/or TGF.alpha.. Leukemia inhibitory factor (LIF) and ciliary neurotrophic factor (CNTF) can optionally be added to enhance the effect of EGF, FGF-1 or TGF.alpha.. Also provided are methods of producing radial glial cells from ependymal cells, as well as methods of proliferating ependymal cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

 67. Document ID: US 20030017589 A1

L13: Entry 67 of 169

File: PGPB

Jan 23, 2003

PGPUB-DOCUMENT-NUMBER: 20030017589

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030017589 A1

TITLE: Culture system for rapid expansion of human embryonic stem cells

PUBLICATION-DATE: January 23, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandalam, Ramkumar	Union City	CA	US	
Xu, Chunhui	Cupertino	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Carpenter, Melissa K.	Castro Valley	CA	US	

US-CL-CURRENT: 435/366**ABSTRACT:**

This disclosure provides an improved system for culturing human pluripotent stem cells. Traditionally, pluripotent stem cells are cultured on a layer of feeder cells (such as mouse embryonic fibroblasts) to prevent them from differentiating. In the system described here, the role of feeder cells is replaced by components added to the culture environment that support rapid proliferation without differentiation. Effective features are a suitable support structure for the cells, and an effective medium that can be added fresh to the culture without being preconditioned by another cell type. Culturing human embryonic stem cells in fresh medium according to this invention causes the cells to expand surprisingly rapidly, while retaining the ability to differentiate into cells representing all three embryonic germ layers. This new culture system allows for bulk proliferation of PPS cells for commercial production of important products for use in drug screening and human therapy.

68. Document ID: US 20030013193 A1

L13: Entry 68 of 169

File: PGPB

Jan 16, 2003

PGPUB-DOCUMENT-NUMBER: 20030013193

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030013193 A1

TITLE: Method of producing region-specific neurons from human neuronal stem cells

PUBLICATION-DATE: January 16, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wu, Ping	League City	TX	US	

US-CL-CURRENT: 435/368

ABSTRACT:

A method of priming neural stem cells in vitro by adhesively culturing in a mixture of basic fibroblast growth factor, laminin and heparin to differentiate into specific neuronal phenotypes, including cholinergic, glutamatergic and GABAergic neurons, in a region-specific manner, when transplanted in vivo.

69. Document ID: US 20030013192 A1

L13: Entry 69 of 169

File: PGPB

Jan 16, 2003

PGPUB-DOCUMENT-NUMBER: 20030013192

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030013192 A1

TITLE: Method for neural stem cell differentiation using valproate

PUBLICATION-DATE: January 16, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Laeng, Pascal	Washington	DC	US	
Mallon, Barbara	Gaithersburg	MD	US	
Pitts, Lee	Falls Church	VA	US	

US-CL-CURRENT: 435/368; 514/557

ABSTRACT:

The present invention relates to a method for differentiating a neural stem cell into
<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

a neuronal cell such as a neuroblast or neuron in vitro or in vivo. Particularly, the invention provides for a method for neural stem cell differentiation by contacting the neural stem cell with a valproate compound or analog thereof.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

70. Document ID: US 20030003574 A1

L13: Entry 70 of 169

File: PGPB

Jan 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030003574

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030003574 A1

TITLE: Multipotent stem cells from peripheral tissues and uses thereof

PUBLICATION-DATE: January 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Montreal		CA	
Akhavan, Mahnaz	Montreal		CA	
Fernandes, Karl J. L.	Montreal		CA	
Fortier, Mathieu	Orford		CA	
Miller, Freda	Montreal		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to multipotent stem cells, purified from the peripheral tissue of mammals, and capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

71. Document ID: US 20020197238 A1

L13: Entry 71 of 169

File: PGPB

Dec 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020197238

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020197238 A1

TITLE: Platelet derived growth factor (PDGF)-derived neurospheres define a novel class of progenitor cells

PUBLICATION-DATE: December 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Weiss, Samuel
Chojnacki, Andrew K.

Calgary
Calgary

CA
CA

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The present invention is related to the discovery of a novel class of neural progenitor cells, which proliferate in response to platelet derived growth factor (PDGF) and differentiate into neurons and oligodendrocytes but not astrocytes. Progeny of the progenitor cells can be obtained by culturing brain tissue in PDGF without serum, epidermal growth factor (EGF), fibroblast growth factor 2, or transforming growth factor alpha. Upon subculturing into EGF-containing media, these progeny cells can proliferate and form neurospheres, whereas PDGF has no such effect.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

72. Document ID: US 20020192817 A1

L13: Entry 72 of 169

File: PGPB

Dec 19, 2002

PGPUB-DOCUMENT-NUMBER: 20020192817

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020192817 A1

TITLE: Production of tyrosine hydroxylase positive neurons

PUBLICATION-DATE: December 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to a method of producing neurons that express the enzyme tyrosine hydroxylase (TH) by subjecting neural stem cells to FGF-1, a protein kinase A activator, a protein kinase C activator, and dopamine/L-DOPA. Surprisingly, when forskolin is used as a protein kinase A activator, it requires only low levels of FGF-1 and forskolin to efficiently produce TH positive neurons from fetal or adult neural stem cells. Also provided are compositions used to produce TH positive neurons and the resulting neural cell culture, as well as a method of treating disease or conditions which are associated with dopamine neuron loss or dysfunction.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

73. Document ID: US 20020182198 A1

L13: Entry 73 of 169

File: PGPB

Dec 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020182198
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020182198 A1

TITLE: Dopaminergic neuronal survival-promoting factors and uses thereof

PUBLICATION-DATE: December 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Commissiong, John W.	Mississauga		CA	
Raibekas, Andrei A.	Toronto		CA	

US-CL-CURRENT: 424/94.1; 435/183, 435/320.1, 435/368, 435/69.1, 536/23.2

ABSTRACT:

In general, the invention features substantially purified MANF and substantially purified nucleic acids encoding the same. The invention also features a pharmaceutical composition that includes MANF and a pharmaceutically-acceptable excipient, methods for treatment of a neurodegenerative disease, methods for improving dopaminergic neuronal survival during or following cell transplantation, methods for production of neurons for transplantation, and methods for identifying compounds that modulate or mimic MANF's biological activity.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw Desc](#)

74. Document ID: US 20020169102 A1

L13: Entry 74 of 169

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020169102
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020169102 A1

TITLE: Intranasal delivery of agents for regulating development of implanted cells in the CNS

PUBLICATION-DATE: November 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Frey, William H. II	White Bear	MN	US	

US-CL-CURRENT: 514/1; 435/368

ABSTRACT:

The present invention provides a method of regulating the development of a donor cell in the central nervous system of a mammal. The method comprises administering a composition comprising a therapeutically effective amount of at least one regulatory agent, preferably a growth factor such as bFGF, NGF, or IGF-I, or an agent that modulates the immune response to a tissue of the mammal innervated by the trigeminal nerve and/or the olfactory nerve. The methods find use in improving the clinical

outcome of a mammal having undergone a neural regenerative strategy. Hence, the present invention is directed to the treatment and/or prevention of CNS disorders, such as, epilepsy, stroke, ischemia, Huntington disease, Parkinson's disease, ALS, Alzheimer's disease, brain and spinal cord injuries and demyelinating or dysmyelinating disorders, such as Pelizaeus-Merzbacher disease and multiple sclerosis.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw Desc](#)

75. Document ID: US 20020168767 A1

L13: Entry 75 of 169

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020168767

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020168767 A1

TITLE: Method of isolating human neuroepithelial precursor cells from human fetal tissue

PUBLICATION-DATE: November 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mayer-Proschel, Margot	Pittsford	NY	US	
Rao, Mahendra S.	Salt Lake City	UT	US	
Tresco, Patrick A.	Sandy	UT	US	
Messina, Darin J.	Salt Lake City	UT	US	

US-CL-CURRENT: 435/368; 800/8

ABSTRACT:

A method for isolating human neuroepithelial precursor cells from human fetal tissue by culturing the human fetal cells in fibroblast growth factor and chick embryo extract and immunodepleting from the cultured human fetal cells any cells expressing A2B5, NG2 and eNCAM is provided. In addition, methods for transplanting these cells into an animal are provided. Animals models transplanted with these human neuroepithelial precursor cells and methods for monitoring survival, proliferation, differentiation and migration of the cells in the animal model via detection of human specific markers are also provided.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw Desc](#)

76. Document ID: US 20020168766 A1

L13: Entry 76 of 169

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020168766

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020168766 A1

TITLE: Genetically altered human pluripotent stem cells

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gold, Joseph D.	San Francisco	CA	US	
Carpenter, Melissa K.	Castro Valley	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/455

ABSTRACT:

This disclosure provides a system for obtaining genetically altered primate pluripotent stem (pPS) cells. The pPS cells are maintained in an undifferentiated state by culturing on a feeder cell line that has been immortalized and altered with drug resistance genes. Alternatively, the role of the feeder cells is replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. The cells can be genetically altered with a viral vector or DNA/lipid complex, and then selected for successful transfection by drug-resistant phenotype in the transfected cells. The system allows for bulk proliferation of genetically altered pPS cells as important products for use in human therapy or drug screening.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KOMC	Draw. Des.
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 77. Document ID: US 20020165213 A1

L13: Entry 77 of 169

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020165213

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020165213 A1

TITLE: Estrogen induced neural stem cell increase

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary	CA		
Shingo, Tetsuro	Okayama	JP		

US-CL-CURRENT: 514/182; 435/368, 435/6

ABSTRACT:

This invention provides a method of increasing the number of neural stem cells by using estrogen. Estrogen induces an increase in the number of neural stem cells, resulting in a larger pool of neural stem cells, which may be used in the treatment or amelioration of neurodegenerative diseases or conditions. Another aspect of the invention provides a method for identifying genes that regulate the estrogen-induced stem cell increase.

78. Document ID: US 20020164791 A1

L13: Entry 78 of 169

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164791

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164791 A1

TITLE: Primitive neural stem cells and method for differentiation of stem cells to neural cells

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Van Der Kooy, Derek	Toronto	MA	CA	
Tropepe, Vincent	Boston		US	

US-CL-CURRENT: 435/366

ABSTRACT:

Described are a novel cell type in the neural lineage, and method of producing the same based on the degree of neural commitment and growth factor responsiveness in vitro and the potential to give rise to neural and non-neuronal progeny in vivo. The novel cell type of neural lineage and cells derived therefrom have a number of applications including applications regarding tissue engineering, transplantation and gene therapy and drug discovery. Also described are suggested uses of the method and cell type including isolating genes that positively and negatively regulate the transmission from an ES cell to a neural cell and generally for studying ES cell models of mammalian neural development.

 79. Document ID: US 20020164314 A1

L13: Entry 79 of 169

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164314

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164314 A1

TITLE: Ovarian hormone induced neural stem cell increase

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

ABSTRACT:

This invention provides a method of increasing the number of neural stem cells by using ovarian hormones. Ovarian hormones induce an increase in the number of neural stem cells, resulting in a larger pool of neural stem cells, which may be used in the treatment or amelioration of neurodegenerative diseases or conditions. Another aspect of the invention provides a method for identifying genes that regulate the ovarian hormone-induced stem cell increase.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Draw. Des.
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 80. Document ID: US 20020164309 A1

L13: Entry 80 of 169

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164309

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164309 A1

TITLE: Cultures of human CNS neural stem cells

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa	Foster City	CA	US	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The invention provides a method for determining the effect of a biological agent comprising contacting a cell culture with a biological agent. The cell culture of the invention contains a culture medium containing one or more preselected growth factors effective for inducing multipotent central nervous system (CNS) neural stem cell proliferation. The cell culture also contains, suspended in the culture medium, human multipotent CNS neural stem cells that are derived from primary CNS neural tissue that have a doubling rate faster than 30 days.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Draw. Des.
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 81. Document ID: US 20020164308 A1

L13: Entry 81 of 169

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164308

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164308 A1

TITLE: Embryonic stem cells and neural progenitor cells derived therefrom

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reubinoff, Benjamin Eithan	Mevaseret Zign		IL	
Pera, Martin Frederick	Prshrab Victoria		AU	
Ben-Hur, Tamir	Jerusàlem		IL	

US-CL-CURRENT: 424/93.7; 435/366, 435/368

ABSTRACT:

The present invention relates to undifferentiated human embryonic stem cells, methods of cultivation and propagation and production of differentiated cells. In particular it relates to the production of human ES cells capable of yielding somatic differentiated cells *in vitro*, as well as committed progenitor cells such as neural progenitor cells capable of giving rise to mature somatic cells including neural cells and/or glial cells and uses thereof.

This invention provides methods that generate *in vitro* and *in vivo* models of controlled differentiation of ES cells towards the neural lineage. The model, and cells that are generated along the pathway of neural differentiation may be used for: the study of the cellular and molecular biology of human neural development, discovery of genes, growth factors, and differentiation factors that play a role in neural differentiation and regeneration, drug discovery and the development of screening assays for teratogenic, toxic and neuroprotective effects.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

82. Document ID: US 20020151056 A1

L13: Entry 82 of 169

File: PGPB

Oct 17, 2002

PGPUB-DOCUMENT-NUMBER: 20020151056

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020151056 A1

TITLE: Novel differentiation inducing process of embryonic stem cell to ectodermal cell and its use

PUBLICATION-DATE: October 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sasai, Yoshiki	Kyoto		JP	
Nishikawa, Shin-Ichi	Kyoto		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

A method for inducing differentiation of an embryonic stem cell into an ectodermal cell and an ectoderm-derived cell, which comprises culturing the embryonic stem cell under non-aggregation conditions; a medium and a medium supernatant used in the method; an agent for inducing differentiation used in the method; a stroma cell or a stroma cell-derived factor having activity of inducing differentiation in the method; an antibody which specifically recognizes the stroma cell; an antigen which

recognizes the antibody; a cell induced by the method; a method for evaluating or screening a substance relating to the regulation in a differentiation step from an embryonic stem cell into an ectodermal cell or an ectoderm-derived cell by carrying out the method; and a medicament comprising the stroma cell, the stroma cell-derived cell, the antibody, the antigen or the cell.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

83. Document ID: US 20020151053 A1

L13: Entry 83 of 169

File: PGPB

Oct 17, 2002

PGPUB-DOCUMENT-NUMBER: 20020151053

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020151053 A1

TITLE: Direct differentiation of human pluripotent stem cells and characterization of differentiated cells

PUBLICATION-DATE: October 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Thies, R. Scott	Pleasanton	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

This invention provides a system for efficiently producing differentiated cells from pluripotent cells, such as human embryonic stem cells. Rather than permitting the cells to form embryoid bodies according to established techniques, differentiation is effected directly in monolayer culture on a suitable solid surface. The cells are either plated directly onto a differentiation-promoting surface, or grown initially on the solid surface in the absence of feeder cells and then exchanged into a medium that assists in the differentiation process. The solid surface and the culture medium can be chosen to direct differentiation down a particular pathway, generating a cell population that is remarkably uniform. The methodology is well adapted to bulk production of committed precursor and terminally differentiated cells for use in drug screening or regenerative medicine.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

84. Document ID: US 20020137204 A1

L13: Entry 84 of 169

File: PGPB

Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020137204

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020137204 A1

TITLE: Techniques for growth and differentiation of human pluripotent stem cells

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem (pPS) cells in the absence of feeder cells. The role of the feeder cells can be replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. Permanent cell lines are provided that can produce conditioned medium on a commercial scale. Methods have also been discovered to genetically alter pPS cells by introducing the cells with a viral vector or DNA/lipid complex. The system described in this disclosure allows for bulk proliferation of pPS cells for use in studying the biology of pPS cell differentiation, and the production of important products for use in human therapy.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

 85. Document ID: US 20020136709 A1

L13: Entry 85 of 169

File: PGPB

Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020136709

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020136709 A1

TITLE: In vitro-derived adult pluripotent stem cells and uses therefor

PUBLICATION-DATE: September 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zahner, Joseph Edward	Saint Louis	MI	US	
Sharda, Asutosh N.	Saint Louis	MO	US	

US-CL-CURRENT: 424/93.21; 435/366, 435/455

ABSTRACT:

Methods for deriving adult pluripotent stem cells from fully differentiated adult somatic cells by in vitro nuclear remodeling are provided. Cells cultured from a variety of tissue sources are treated in vitro to reverse the tissue specific epigenetic chromosomal changes associated with differentiation. Remodeled cells resemble embryonic stem cells by expressing telomerase and demonstrating pluripotency. The cells can be genetically modified to produce heterologous proteins or to correct for genetic defects. Methods for treating a human by implanting in vitro-derived adult pluripotent stem cells ("NucREM.TM. cells") and generating

engineered tissues for implantation are also disclosed. Advantages to this invention include the non-use of embryos to obtain an unlimited supply of stem cells for therapy and the ability to generate autologous cells and tissues for therapeutic use.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des.](#)

86. Document ID: US 20020123143 A1

L13: Entry 86 of 169

File: PGPB

Sep 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020123143

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020123143 A1

TITLE: Multipotent stem cells from peripheral tissues and uses thereof

PUBLICATION-DATE: September 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Montreal		CA	
Akhavan, Mahnaz	Montreal		CA	
Fernandes, Karl J. L.	Montreal		CA	
Fortier, Mathieu	Orford		CA	
Miller, Freda	Montreal		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to multipotent stem cells, purified from the peripheral tissue of mammals, and capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des.](#)

87. Document ID: US 20020114788 A1

L13: Entry 87 of 169

File: PGPB

Aug 22, 2002

PGPUB-DOCUMENT-NUMBER: 20020114788

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020114788 A1

TITLE: Cell implantation therapy for neurological diseases or disorders

PUBLICATION-DATE: August 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Isacson, Ole	Cambridge	MA	US
Kim, Kwang Soo	Lexington	MA	US

US-CL-CURRENT: 424/93.21; 435/368, 435/456

ABSTRACT:

Disclosed herein is a method for generating functional lineage-restricted progenitors from embryonic stem cells for obtaining donor cells of specific neuronal cell-fate, in sufficient quantities for the unmet cell transplantation need for treating patients with neurodegenerative diseases or disorders.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

88. Document ID: US 20020098585 A1

L13: Entry 88 of 169

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020098585

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020098585 A1

TITLE: Hypoxia-mediated neurogenesis

PUBLICATION-DATE: July 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

US-CL-CURRENT: 435/368; 435/377

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

89. Document ID: US 20020098584 A1

L13: Entry 89 of 169

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020098584

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020098584 A1

TITLE: Postmortem stem cells

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Palmer, Theo D.	San Carlos	CA	US	
Schwartz, Philip H.	Irvine	CA	US	
Taupin, Philippe	La Jolla	CA	US	
Gage, Fred H.	La Jolla	CA	US	

US-CL-CURRENT: 435/366; 435/384

ABSTRACT:

Disclosed are optimized methodologies for isolating and propagating stem cells from biopsies and postmortem tissues. Specifically disclosed are methods of culturing neural stem cells in the presence of a cocktail of trophic factors/co-factors for enhanced propagation.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

 90. Document ID: US 20020098582 A1

L13: Entry 90 of 169

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020098582

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020098582 A1

TITLE: Differentiated stem cells suitable for human therapy

PUBLICATION-DATE: July 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gold, Joseph D.	San Francisco	CA	US	
Lebkowski, Jane S.	Portola Valley	CA	US	

US-CL-CURRENT: 435/366; 424/93.21, 435/194

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in depletion of undifferentiated cells, or expression of a marker that can be used to remove them later. Suitable effector sequences encode a toxin, a protein that induces apoptosis, a cell-surface antigen, or an enzyme (such as thymidine kinase) that converts a prodrug into a substance that is lethal to the cell. The differentiated cell populations produced according to this disclosure are suitable for use in tissue regeneration, and non-therapeutic applications such as drug screening.

91. Document ID: US 20020094571 A1

L13: Entry 91 of 169

File: PGPB

Jul 18, 2002

PGPUB-DOCUMENT-NUMBER: 20020094571
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020094571 A1

TITLE: Hypoxia-mediated neurogenesis

PUBLICATION-DATE: July 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

92. Document ID: US 20020090723 A1

L13: Entry 92 of 169

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020090723
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020090723 A1

TITLE: Techniques for growth and differentiation of human pluripotent stem cells

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/368

ABSTRACT:

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

This disclosure provides an improved system for culturing human pluripotent stem (pPS) cells in the absence of feeder cells. The role of the feeder cells can be replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. Permanent cell lines are provided that can produce conditioned medium on a commercial scale. Methods have also been discovered to genetically alter pPS cells by introducing the cells with a viral vector or DNA/lipid complex. The system described in this disclosure allows for bulk proliferation of pPS cells for use in studying the biology of pPS cell differentiation, and the production of important products for use in human therapy.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw Des](#)

93. Document ID: US 20020090722 A1

L13: Entry 93 of 169

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020090722

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020090722 A1

TITLE: Pluripotent mammalian cells

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Dominko, Tanja	Southbridge	MA	US	
Page, Raymond L.	Southbridge	MA	US	
Colman, Alan	Midlothian	VA	GB	
Vaught, Todd	Christiansburg	VA	US	
Marshall, Vivienne	Christiansburg		US	

US-CL-CURRENT: 435/366; 435/325

ABSTRACT:

The invention relates to a method of making pluripotent stem cells that does not involve the formation of early preimplantation embryos or fetal tissue. The method has general utility in the production of pluripotent stem cells from many mammalian species but has particular application in man where pluripotent stem cell production can be customized to particular human individual. The method involves the fusion of donor somatic or stem cells (or their karyoplasts) with cytoplasmic, membrane-delimited fragments of mammalian oocytes or zygotes. After the initial genomic reprogramming occurs, the cells can proliferate and thus multiply *in vitro* yielding a large number of autologous cells for cell therapy application. The result of this process is a cell population genetically identical to the somatic, differentiated cells derived from an individual patient. However, these cells are pluripotent in that upon application of specific growth factors, the cells are capable of differentiating into specific cell types as required by the sought clinical indication.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw Des](#)

94. Document ID: US 20020086005 A1

L13: Entry 94 of 169

File: PGPB

Jul 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020086005

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020086005 A1

TITLE: Tolerizing allografts of pluripotent stem cells

PUBLICATION-DATE: July 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Chiu, Choy-Pik	Cupertino	CA	US	
Kay, Robert M.	San Francisco	CA	US	

US-CL-CURRENT: 424/93.21; 424/93.7, 435/366

ABSTRACT:

This disclosure provides a system for overcoming HLA mismatch between an allograft derived from stem cells, and a patient being treated for tissue regeneration. A state of specific immune tolerance is induced in the patient, by administering a population of tolerizing cells derived from the stem cells. This allows the patient to accept an allograft of differentiated cells derived from the same source. This invention is important because it allows a single line of stem cells to act as a universal donor source for tissue regeneration in any patient, regardless of tissue type.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Desv](#)

95. Document ID: US 20020081724 A1

L13: Entry 95 of 169

File: PGPB

Jun 27, 2002

PGPUB-DOCUMENT-NUMBER: 20020081724

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020081724 A1

TITLE: Techniques for growth and differentiation of human pluripotent stem cells

PUBLICATION-DATE: June 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/354, 435/384

ABSTRACT:

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.14&ref=13&dbname=PGPB,USPT,US...> 12/8/04

This disclosure provides an improved system for culturing human pluripotent stem (pPS) cells in the absence of feeder cells. The role of the feeder cells can be replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. Permanent cell lines are provided that can produce conditioned medium on a commercial scale. Methods have also been discovered to genetically alter pPS cells by introducing the cells with a viral vector or DNA/lipid complex. The system described in this disclosure allows for bulk proliferation of pPS cells for use in studying the biology of pPS cell differentiation, and the production of important products for use in human therapy.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

96. Document ID: US 20020068045 A1

L13: Entry 96 of 169

File: PGPB

Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020068045
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020068045 A1

TITLE: Embryonic stem cells and neural progenitor cells derived therefrom

PUBLICATION-DATE: June 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reubinoff, Benjamin Eithan	Mevaseret-Zion	IL		
Pera, Martin Frederick	Prahran	AU		
Ben-Hur, Tamir	Ramat Sharet	IL		

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The present invention provides undifferentiated human embryonic stem cells, methods of cultivation and propagation and production of differentiated cells. In particular it relates to the production of human ES cells capable of yielding somatic differentiated cells in vitro, and committed progenitor cells such as neural progenitor cells capable of giving rise to mature somatic cells including neural cells and/or glial cells and uses thereof. The invention also provides methods that generate in vitro and in vivo models of controlled differentiation of ES cells towards the neural lineage. The model, and the cells that are generated along the pathway of neural differentiation may be used for the study of the cellular and molecular biology of human neural development, for the discovery of genes, growth factors, and differentiation factors that play a role in neural differentiation and regeneration, for drug discovery and for the development of screening assays for teratogenic, toxic and neuroprotective effects.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

97. Document ID: US 20020064873 A1

L13: Entry 97 of 169

File: PGPB

May 30, 2002

PGPUB-DOCUMENT-NUMBER: 20020064873
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020064873 A1

TITLE: Stable neural stem cell lines

PUBLICATION-DATE: May 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yang, Renji	Silver Spring	MD	US	
Johe, Karl K.	Potomac	MD	US	

US-CL-CURRENT: 435/325; 435/368

ABSTRACT:

A systematic and efficient method for establishing stable neural stem cell lines and neuronal progenitor lines is described. The resulting cell lines provide robust, simple, and reproducible cultures of human and other mammalian neurons in commercially useful mass quantities while maintaining normal karyotypes and normal neuronal phenotypes.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

98. Document ID: US 20020049178 A1

L13: Entry 98 of 169

File: PGPB

Apr 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020049178
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020049178 A1

TITLE: Method of inducing neuronal production in the brain and spinal cord

PUBLICATION-DATE: April 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Benraiss, Abdellatif	Astoria	NY	US	

US-CL-CURRENT: 514/44; 424/93.2, 435/368, 435/456

ABSTRACT:

The present invention relates to methods of inducing neuronal production in the brain, recruiting neurons to the brain, and treating a neurodegenerative condition by providing a nucleic acid construct encoding a neurotrophic factor, and injecting the nucleic acid construct intraventricularly into a subject's brain.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

99. Document ID: US 20020045251 A1

L13: Entry 99 of 169

File: PGPB

Apr 18, 2002

PGPUB-DOCUMENT-NUMBER: 20020045251

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020045251 A1

TITLE: COMMON NEURAL PROGENITOR FOR THE CNS AND PNS

PUBLICATION-DATE: April 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
RAO, MAHENDRA S.	SALT LAKE CITY	UT	US	
MUJTABA, TAHMINA	SANDY	UT	US	

US-CL-CURRENT: 435/325; 435/368, 435/373, 435/377, 435/383, 435/384, 435/387,
435/391, 435/395, 435/402

ABSTRACT:

A method of generating neural crest stem cells involves inducing neuroepithelial stem cells to differentiate in vitro into neural crest stem cells. Differentiation can be induced by replating the cells on laminin, withdrawing mitogens, or adding dorsalizing agents to the growth medium. Derivatives of the peripheral nervous system can be generated by inducing the neural crest stem cells to differentiate in vitro.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Des.](#)

100. Document ID: US 20020039724 A1

L13: Entry 100 of 169

File: PGPB

Apr 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020039724

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020039724 A1

TITLE: Neural progenitor cell populations

PUBLICATION-DATE: April 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

This invention provides populations of neural progenitor cells, differentiated neurons, glial cells, and astrocytes. The populations are obtained by culturing stem cell populations (such as embryonic stem cells) in a cocktail of growth conditions that initiates differentiation, and establishes the neural progenitor population. The

progenitors can be further differentiated in culture into a variety of different neural phenotypes, including dopaminergic neurons. The differentiated cell populations or the neural progenitors can be generated in large quantities for use in drug screening and the treatment of neurological disorders.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequence](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des.](#)

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L12 AND neural stem cell

169

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Search Results - Record(s) 101 through 169 of 169 returned.

101. Document ID: US 20020031792 A1

Using default format because multiple data bases are involved.

L13: Entry 101 of 169

File: PGPB

Mar 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020031792
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020031792 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: March 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Uchida, Nobuko	Palo Alto	CA	US	
Buck, David W.	Santa Clara	CA	US	
Weissman, Irving	Redwood City	CA	US	

US-CL-CURRENT: 435/7.21; 435/368

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

102. Document ID: US 20020028510 A1

L13: Entry 102 of 169

File: PGPB

Mar 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020028510
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020028510 A1

TITLE: Human cord blood as a source of neural tissue for repair of the brain and spinal cord

PUBLICATION-DATE: March 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sanberg, Paul	Spring Hill	FL	US	
Sanchez-Remos, Juan	Tampa	FL	US	
Willing, Alison	Tampa	FL	US	
Richard, Daniel D.	Sedona	AZ	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to the use of umbilical cord blood cells from a donor or patient to provide neural cells which may be used in transplantation. The isolated cells according to the present invention may be used to effect autologous and allogeneic transplantation and repair of neural tissue, in particular, tissue of the brain and spinal cord and to treat neurodegenerative diseases of the brain and spinal cord.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

103. Document ID: US 20020019046 A1

L13: Entry 103 of 169

File: PGPB

Feb 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020019046

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020019046 A1

TITLE: Direct differentiation of human pluripotent stem cells and characterization of differentiated cells

PUBLICATION-DATE: February 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Thies, R. Scott	Pleasanton	CA	US	

US-CL-CURRENT: 435/368; 435/4, 435/91.1

ABSTRACT:

This invention provides a system for efficiently producing differentiated cells from pluripotent cells, such as human embryonic stem cells. Rather than permitting the cells to form embryoid bodies according to established techniques, differentiation is effected directly in monolayer culture on a suitable solid surface. The cells are either plated directly onto a differentiation-promoting surface, or grown initially on the solid surface in the absence of feeder cells and then exchanged into a medium that assists in the differentiation process. The solid surface and the culture medium can be chosen to direct differentiation down a particular pathway, generating a cell population that is remarkably uniform. The methodology is well adapted to bulk production of committed precursor and terminally differentiated cells for use in drug screening or regenerative medicine.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

104. Document ID: US 20020016002 A1

L13: Entry 104 of 169

File: PGPB

Feb 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020016002

PGPUB-FILING-TYPE: new

TITLE: Multipotent neural stem cells from peripheral tissues and uses thereof

PUBLICATION-DATE: February 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Montreal		CA	
Akhavan, Mahnaz	Montreal		CA	
Fernandes, Karl J. L.	Montreal		CA	
Fortier, Mathieu	Orford		CA	
Miller, Freda	Montreal		CA	

US-CL-CURRENT: 435/368; 435/366

ABSTRACT:

This invention relates to multipotent neural stem cells, purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Draw. Des.
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 105. Document ID: US 20020012903 A1

L13: Entry 105 of 169

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020012903

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020012903 A1

TITLE: Method for isolating and purifying multipotential neural progenitor cells and multipotential neural progenitor cells

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Okano, Hideyuki	Osaka		JP	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

The present invention relates to a method of separating multipotential neural progenitor cells from a mixed population of cell types. This method includes selecting a promoter which functions selectively in the neural progenitor cells, introducing a nucleic acid molecule encoding a fluorescent protein under control of said promoter into all cell types of the mixed population of cell types, allowing only the neural progenitor cells, but not other cell types, within the mixed population to express said fluorescent protein, identifying cells of the mixed

population of cell types that are fluorescent, which are restricted to the neural progenitor cells, and separating the fluorescent cells from the mixed population of cell types, wherein the separated cells are restricted to the neural progenitor cells. The present invention also relates to an isolated human musashi promoter and an enriched or purified preparation of isolated multipotential neural progenitor cells.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Des.
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106. Document ID: US 20020009743 A1

L13: Entry 106 of 169

File: PGPB

Jan 24, 2002

PGPUB-DOCUMENT-NUMBER: 20020009743

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020009743 A1

TITLE: Neural progenitor cell populations

PUBLICATION-DATE: January 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	

US-CL-CURRENT: 435/6; 424/93.21, 435/368

ABSTRACT:

This invention provides populations of neural progenitor cells, differentiated neurons, glial cells, and astrocytes. The populations are obtained by culturing stem cell populations (such as embryonic stem cells) in a cocktail of growth conditions that initiates differentiation, and establishes the neural progenitor population. The progenitors can be further differentiated in culture into a variety of different neural phenotypes, including dopaminergic neurons. The differentiated cell populations or the neural progenitors can be generated in large quantities for use in drug screening and the treatment of neurological disorders.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Des.
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107. Document ID: US 20020004039 A1

L13: Entry 107 of 169

File: PGPB

Jan 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020004039

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020004039 A1

TITLE: Methods for treating neurological deficits

PUBLICATION-DATE: January 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reid, James Steven	Berkeley	CA	US	
Fallon, James H.	Irvine	CA	US	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The present invention features methods and compositions for treating a patient who has a neurological deficit. The method can be carried out, for example, by contacting (in vivo or in culture) a neural progenitor cell of the patient's central nervous system (CNS) with a polypeptide that binds the epidermal growth factor (EGF) receptor and directing progeny of the proliferating progenitor cells to migrate en masse to a region of the CNS in which they will reside and function in a manner sufficient to reduce the neurological deficit. The method may include a further step in which the progeny of the neural precursor cells are contacted with a compound that stimulates differentiation.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

108. Document ID: US 20020001578 A1

L13: Entry 108 of 169

File: PGPB

Jan 3, 2002

PGPUB-DOCUMENT-NUMBER: 20020001578

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020001578 A1

TITLE: Treatment of disorders by implanting stem cells and/or progeny thereof into gastrointestinal organs

PUBLICATION-DATE: January 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Pasricha, Pankaj J.	Houston	TX	US	
Micci, Maria A.	Dickinson	TX	US	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

A method of treating a disorder, typically a gastrointestinal disorder, that includes implanting stem cells and/or progeny thereof into a gastrointestinal organ of a subject. Also, a method of producing enhanced levels of insulin that includes implanting stem cells and/or progeny thereof into the pancreas of a subject.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

109. Document ID: US 20010055808 A1

L13: Entry 109 of 169

File: PGPB

Dec 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010055808

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010055808 A1

TITLE: Use of collagenase in the preparation of neural stem cell cultures

PUBLICATION-DATE: December 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Uchida, Nobuko	Palo Alto	CA	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The invention provides a method for using collagenase to dissociate neural stem cells in neural stem cell cultures. The collagenase treatment results in an increased cell viability and an increased number of proliferated neural stem cells over time.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Desc](#)

110. Document ID: US 20010055587 A1

L13: Entry 110 of 169

File: PGPB

Dec 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010055587

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010055587 A1

TITLE: TRANSPLANTATION OF NEURAL CELLS FOR THE TREATMENT OF CHRONIC PAIN OR SPASTICITY

PUBLICATION-DATE: December 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
DINSMORE, JONATHAN	BROOKLINE	MA	US	
SIEGAN, JULIE	BOSTON	MA	US	

US-CL-CURRENT: 424/93.7; 424/423, 435/368

ABSTRACT:

Methods for using neural cells to treat chronic pain and/or spasticity are described. The neural cells can be derived from any mammal, and are preferably human or porcine in origin. The neural cells preferably are serotonergic cells or are gamma-aminobutyric acid (GABA)-producing cells. Neural cells can be obtained from adult, juvenile, embryonic or fetal donors. Neural cells can be modified to be suitable for transplantation into a subject. For example, the neural cells can be modified such that an antigen (e.g., an MHC class I antigen) on the cell surface which is capable of stimulating an immune response against the cell in a subject is altered (e.g., by contact with an anti-MHC class I antibody, or a fragment or derivative thereof) to inhibit rejection of the cell when introduced into the subject or can be genetically modified to produce a factor. In one embodiment, the neural cells are obtained from a

pig which is essentially free from organisms or substances which are capable of transmitting infection or disease to the recipient subject. The neural cells of the present invention can be used to treat chronic pain and/or spasticity by delivering the cells into the spinal cord of a subject.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

111. Document ID: US 20010046489 A1

L13: Entry 111 of 169

File: PGPB

Nov 29, 2001

PGPUB-DOCUMENT-NUMBER: 20010046489

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010046489 A1

TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus

PUBLICATION-DATE: November 29, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Habener, Joel E.	Newton Center	MA	US	
Zulewski, Henryk	Geneva	MA	CH	
Abraham, Elizabeth J.	Quincy	MA	US	
Thomas, Melissa K.	Boston		US	
Vallejo, Mario	Madrid		ES	

US-CL-CURRENT: 424/93.21; 424/152.1, 435/366, 514/9

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

112. Document ID: US 20010044122 A1

L13: Entry 112 of 169

File: PGPB

Nov 22, 2001

PGPUB-DOCUMENT-NUMBER: 20010044122

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010044122 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Buck, David W.	Heathfield	CA	GB	
Uchida, Nobuko	Palo Alto	CA	US	
Weissman, Irving	Redwood City		US	

US-CL-CURRENT: 435/7.21; 435/368

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

113. Document ID: US 20010039049 A1

L13: Entry 113 of 169

File: PGPB

Nov 8, 2001

PGPUB-DOCUMENT-NUMBER: 20010039049

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010039049 A1

TITLE: Erythropoietin-mediated neurogenesis

PUBLICATION-DATE: November 8, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

114. Document ID: US 20010034061 A1

http://westbrs:9000/bin/cgi-bin/accum_query.pl

12/8/04

PGPUB-DOCUMENT-NUMBER: 20010034061
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20010034061 A1

TITLE: Methods for isolation and activation of, and control of differentiation from, stem and progenitor cells

PUBLICATION-DATE: October 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Csete, Marie	South Pasadena	CA	US	
Doyle, John	South Pasadena	CA	US	
Wold, Barbara	San Marino	CA	US	

US-CL-CURRENT: 435/377; 435/4, 435/455

ABSTRACT:

The present invention provides a method of isolating, maintaining, and/or enriching for stem or progenitor cells derived from diverse organ or tissue sources. The invention specifically teaches that these can be accomplished by the controlled use of subatmospheric oxygen culture, and that the precise oxygen level or levels must be determined empirically and/or by reference to physiologic levels within intact functioning organ or tissue.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

115. Document ID: US 20010024824 A1

L13: Entry 115 of 169

File: PGPB

Sep 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010024824
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20010024824 A1

TITLE: Stem cells and their use in transplantation

PUBLICATION-DATE: September 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Moss, Peter Ian	London		GB	
Walters, David Martin	London		GB	
Pointer, Graham	London		GB	

US-CL-CURRENT: 435/366; 424/93.7

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are

capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

116. Document ID: US 6812027 B2

L13: Entry 116 of 169

File: USPT

Nov 2, 2004

US-PAT-NO: 6812027

DOCUMENT-IDENTIFIER: US 6812027 B2

TITLE: Discovery, localization, harvest, and propagation of an FGF2 and BDNF-responsive population of neural and neuronal progenitor cells in the adult human forebrain

DATE-ISSUED: November 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldman; Steven A.	South Salem	NY		
Nedergaard; Maiken	South Salem	NY		

US-CL-CURRENT: 435/377; 435/325, 435/366, 435/368, 435/383, 435/384, 435/455, 436/513

ABSTRACT:

The present invention provides neuronal progenitor cells which have been identified in histological sections of the adult human brain. The present invention also provides methods to localize, characterize, harvest, and propagate neuronal progenitor cells derived from human brain tissue. Additional methods are provided for introducing and expressing genes in the brain.

25 Claims, 32 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

117. Document ID: US 6787356 B1

L13: Entry 117 of 169

File: USPT

Sep 7, 2004

US-PAT-NO: 6787356

DOCUMENT-IDENTIFIER: US 6787356 B1

TITLE: Cell expansion system for use in neural transplantation

DATE-ISSUED: September 7, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Studer; Lorenz	New York	NY		
McKay; Ron D.	Bethesda	MD		

US-CL-CURRENT: 435/377; 424/93.21, 435/325, 435/384, 514/44

ABSTRACT:

The invention provides a method of culturing cells which includes a proliferating step in which the number of precursor cells is expanded and a differentiating step in which the expanded precursor cells develop into neuronal cells. The proliferating step includes the step of incubating the precursor cells in proliferating medium which includes basic fibroblast growth factor (bFGF). The differentiating step includes incubating the precursor cells in differentiation media in a manner effective to form a cellular aggregate that is not adhered to any surface of the incubation vessel. In a preferred embodiment, the cells are incubated in a roller tube. The differentiation media can also include at least one differentiating agent. The invention also provides a method for treating a neurological disorder, such as Parkinson's disease, a method of introducing a gene product into a brain of a patient, an assay for neurologically active substances, and a cell culture.

23 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Drawings](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

118. Document ID: US 6787355 B1

L13: Entry 118 of 169

File: USPT

Sep 7, 2004

US-PAT-NO: 6787355

DOCUMENT-IDENTIFIER: US 6787355 B1

TITLE: Multipotent neural stem cells from peripheral tissues and uses thereof

DATE-ISSUED: September 7, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miller; Freda D.	Montreal			CA
Gloster; Andrew	Saskatoon			CA
Toma; Jean	Montreal			CA

US-CL-CURRENT: 435/377; 435/325, 435/375, 435/378, 435/383

ABSTRACT:

This invention relates to multipotent neural stem cells, purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell

types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

8 Claims, 0 Drawing figures
Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw. Desc.](#)

119. Document ID: US 6777233 B2

L13: Entry 119 of 169

File: USPT

Aug 17, 2004

US-PAT-NO: 6777233

DOCUMENT-IDENTIFIER: US 6777233 B2

TITLE: Cultures of human CNS Neural stem cells

DATE-ISSUED: August 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Foster City	CA		

US-CL-CURRENT: 435/368; 435/377

ABSTRACT:

The invention provides a method for determining the effect of a biological agent comprising contacting a cell culture with a biological agent. The cell culture of the invention contains a culture medium containing one or more preselected growth factors effective for inducing multipotent central nervous system (CNS) neural stem cell proliferation. The cell culture also contains, suspended in the culture medium, human multipotent CNS neural stem cells that are derived from primary CNS neural tissue that have a doubling rate faster than 30 days.

2 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw. Desc.](#)

120. Document ID: US 6767738 B1

L13: Entry 120 of 169

File: USPT

Jul 27, 2004

US-PAT-NO: 6767738

DOCUMENT-IDENTIFIER: US 6767738 B1

TITLE: Method of isolating adult mammalian CNS-derived progenitor stem cells using density gradient centrifugation

DATE-ISSUED: July 27, 2004

INVENTOR-INFORMATION:

http://westbrs:9000/bin/cgi-bin/accum_query.pl

12/8/04

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gage; Fred H.	La Jolla	CA		
Palmer; Theo	San Carlos	CA		
Safar; Francis G.	Irvine	CA		
Takahashi; Jun	Kyoto			JP
Takahashi; Masayo	Kyoto			JP

US-CL-CURRENT: 435/325; 435/366, 435/368, 435/378

ABSTRACT:

The present invention is directed to methods of repairing damaged or diseased, specialized or differentiated tissue in mature animals, particularly neuronal tissue such as retinas. In particular, the invention relates to transplantation of adult, hippocampus-derived progenitor cells into a selected neural tissue site of a recipient. These cells can functionally integrate into mature and immature neural tissue. The invention encompasses, in one aspect, repopulating a retina of a dystrophic animal with neurons, by injecting clonally derived, adult central nervous system derived stem cells (ACSC) derived from a healthy donor animal into an eye of the dystrophic recipient. Herein disclosed is the first successful and stable integration of clonally derived ACSC into same-species but different strain recipients (e. g., Fischer rat-derived adult hippocampal derived progenitor cells (AHPCs) into dystrophic RCS rats). Surprisingly, AHPCs were also found to integrate successfully into a xenogeneic recipient (e.g., rat AHPCs into the retina of dystropic rd-I mice).

13 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KUMC](#) | [Draw. Des.](#)

121. Document ID: US 6680198 B1

L13: Entry 121 of 169

File: USPT

Jan 20, 2004

US-PAT-NO: 6680198

DOCUMENT-IDENTIFIER: US 6680198 B1

TITLE: Engraftable human neural stem cells

DATE-ISSUED: January 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 424/93.7

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons,

oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes *in vivo* in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia *in vitro* as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

2 Claims, 53 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KOMC	Draw Des
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122. Document ID: US 6673606 B1

L13: Entry 122 of 169

File: USPT

Jan 6, 2004

US-PAT-NO: 6673606

DOCUMENT-IDENTIFIER: US 6673606 B1

TITLE: Therapeutic uses for mesenchymal stromal cells

DATE-ISSUED: January 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tennekoon; Gihan	Wynnewood	PA		
Coyle; Andrew J.	Philadelphia	PA		
Grinspan; Judith	Ardmore	PA		
Beesley; Jackie S.	West Sussex			GB

US-CL-CURRENT: 435/372; 424/93.1, 435/325, 435/366, 435/368, 435/377

ABSTRACT:

Human mesenchymal stromal cells can be induced to differentiate into oligodendrocytes and neurons, respectively. For these cell types, therefore, MSCs can be a therapeutic source, either *in vitro* or *in vivo*, in the context of treating pathologies of the central nervous system which are characterized by neuron loss, such as Parkinson's disease, Alzheimer's disease and stroke, as well as head trauma, or by dysfunction in ganglioside storage or demyelination, such as Tay-Sachs disease, G1 gangliosidosis, metachromatic leukodystrophy, and multiple sclerosis.

123. Document ID: US 6638763 B1

L13: Entry 123 of 169

File: USPT

Oct 28, 2003

US-PAT-NO: 6638763

DOCUMENT-IDENTIFIER: US 6638763 B1

** See image for Certificate of Correction **

TITLE: Isolated mammalian neural stem cells, methods of making such cells

DATE-ISSUED: October 28, 2003

INVENTOR - INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steindler; Dennis A.	Memphis	TN		
Laywell; Eric D.	Memphis	TN		
Kukekou; Valery G.	Memphis	TN		
Thomas; L. Brannon	Johnson City	TN		

US-CL-CURRENT: 435/368; 435/325, 435/377, 435/384

ABSTRACT:

Using a novel culture approach, previously unknown populations of neural progenitor cells have been found within an adult mammalian brain. By limiting cell-cell contact, dissociated adult brain yields at least two types of cell aggregates. These aggregates or clones of stem/precursor cells can be generated from adult brain tissue with significantly long postmortem intervals. Both neurons and glia arise from stem/precursor cells of these cultures, and the cells can survive transplantation to the adult mammalian brain.

1 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

124. Document ID: US 6610540 B1

L13: Entry 124 of 169

File: USPT

Aug 26, 2003

US-PAT-NO: 6610540

DOCUMENT-IDENTIFIER: US 6610540 B1

TITLE: Low oxygen culturing of central nervous system progenitor cells

DATE-ISSUED: August 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csete; Marie	Ann Arbor	MI		
Doyle; John	South Pasadena	CA		
Wold; Barbara J.	San Marino	CA		
McKay; Ron	Bethesda	MD		
Studer; Lorenz	New York	NY		

US-CL-CURRENT: 435/375; 435/325, 435/352, 435/368, 435/377, 435/4**ABSTRACT:**

The present invention relates to the growth of cells in culture under conditions that promote cell survival, proliferation, and/or cellular differentiation. The present inventors have found that proliferation was promoted and apoptosis reduced when cells were grown in lowered oxygen as compared to environmental oxygen conditions traditionally employed in cell culture techniques. Further, the inventors found that differentiation of precursor cells to specific fates also was enhanced in lowered oxygen where a much greater number and fraction of dopaminergic neurons were obtained when mesencephalic precursors were expanded and differentiated in lowered oxygen conditions. Thus at more physiological oxygen levels the proliferation and differentiation of CNS precursors is enhanced, and lowered oxygen is a useful adjunct for ex vivo generation of specific neuron types. Methods and compositions exploiting these findings are described.

11 Claims, 22 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 14

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Drawn Des.
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 125. Document ID: US 6589728 B2

L13: Entry 125 of 169

File: USPT

Jul 8, 2003

US-PAT-NO: 6589728

DOCUMENT-IDENTIFIER: US 6589728 B2

TITLE: Methods for isolation and activation of, and control of differentiation from, stem and progenitor cells

DATE-ISSUED: July 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csete; Marie	South Pasadena	CA		
Doyle; John	South Pasadena	CA		
Wold; Barbara	San Marino	CA		

US-CL-CURRENT: 435/4; 435/375, 435/377**ABSTRACT:**

The present invention provides a method of isolating, maintaining, and/or enriching for stem or progenitor cells derived from diverse organ or tissue sources. The

invention specifically teaches that these can be accomplished by the controlled use of subatmospheric oxygen culture, and that the precise oxygen level or levels must be determined empirically and/or by reference to physiologic levels within intact functioning organ or tissue.

28 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMNC	Draw. Des.
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126. Document ID: US 6576464 B2

L13: Entry 126 of 169

File: USPT

Jun 10, 2003

US-PAT-NO: 6576464

DOCUMENT-IDENTIFIER: US 6576464 B2

TITLE: Methods for providing differentiated stem cells

DATE-ISSUED: June 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gold; Joseph D.	San Francisco	CA		
Lebkowski; Jane S.	Portola Valley	CA		

US-CL-CURRENT: 435/325; 536/23.1, 536/23.4, 536/24.1, 536/25.5

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in depletion of undifferentiated cells, or expression of a marker that can be used to remove them later. Suitable effector sequences encode a toxin, a protein that induces apoptosis, a cell-surface antigen, or an enzyme (such as thymidine kinase) that converts a prodrug into a substance that is lethal to the cell. The differentiated cell populations produced according to this disclosure are suitable for use in tissue regeneration, and non-therapeutic applications such as drug screening.

30 Claims, 10 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMNC	Draw. Des.
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127. Document ID: US 6541255 B1

L13: Entry 127 of 169

File: USPT

Apr 1, 2003

US-PAT-NO: 6541255

DOCUMENT-IDENTIFIER: US 6541255 B1

TITLE: Engraftable human neural stem cells

DATE-ISSUED: April 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 514/44

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

4 Claims, 53 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KWD](#) | [Drawn Desc](#)

128. Document ID: US 6528306 B1

L13: Entry 128 of 169

File: USPT

Mar 4, 2003

US-PAT-NO: 6528306

DOCUMENT-IDENTIFIER: US 6528306 B1

TITLE: Engraftable human neural stem cells

DATE-ISSUED: March 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 435/455

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

3 Claims, 53 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Detailed Abstract](#) | [Claims](#) | [KOMC](#) | [Draw Desc](#)

129. Document ID: US 6498018 B1

L13: Entry 129 of 169

File: USPT

Dec 24, 2002

US-PAT-NO: 6498018

DOCUMENT-IDENTIFIER: US 6498018 B1

TITLE: Cultures of human CNS neural stem cells

DATE-ISSUED: December 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Foster City	CA		

US-CL-CURRENT: 435/29; 435/368

ABSTRACT:

The invention provides a method for determining the effect of a biological agent comprising contacting a cell culture with a biological agent. The cell culture of the invention contains a culture medium containing one or more preselected growth factors effective for inducing multipotent central nervous system (CNS) neural stem cell proliferation. The cell culture also contains, suspended in the culture medium, human multipotent CNS neural stem cells that are derived from primary CNS neural tissue that have a doubling rate faster than 30 days.

4 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Print](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

130. Document ID: US 6495364 B2

L13: Entry 130 of 169

File: USPT

Dec 17, 2002

US-PAT-NO: 6495364

DOCUMENT-IDENTIFIER: US 6495364 B2

TITLE: Mx-1 conditionally immortalized cells

DATE-ISSUED: December 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Messing; Albee	Madison	WI		

US-CL-CURRENT: 435/320.1; 424/93.2, 435/325, 435/455, 514/44

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

2 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Print](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

131. Document ID: US 6468794 B1

US-PAT-NO: 6468794

DOCUMENT-IDENTIFIER: US 6468794 B1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Uchida; Nobuko	Palo Alto	CA		
Buck; David W.	Santa Clara	CA		
Weissman; Irving	Redwood City	CA		

US-CL-CURRENT: 435/368; 435/343

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

13 Claims, 13 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KIMC	Draw. Des.
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 132. Document ID: US 6436389 B1

L13: Entry 132 of 169

File: USPT

Aug 20, 2002

US-PAT-NO: 6436389

DOCUMENT-IDENTIFIER: US 6436389 B1

TITLE: Stimulation of cell proliferation by glycosylated cystatin C

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gage; Fred Harrison	La Jolla	CA		
Taupin; Philippe J.	La Jolla	CA		
Ray; Jasodhara	San Diego	CA		

US-CL-CURRENT: 424/85.1; 424/198.1, 435/325, 435/375, 435/377, 435/4, 514/12, 514/2, 530/350, 530/399

ABSTRACT:

The present invention is based on the discovery and isolation of a co-factor for trophic factors. It has been discovered that trophic factors require a co-factor to

stimulate and/or potentiate the trophic factor activity and/or specificity. This was clearly identified in low density cells where trophic factors are unable, or at best, at minimal levels, able to proliferate undifferentiated cells without a co-factor. In a particular embodiment of the present invention, there is provided a composition comprising glycosylated cystatin C, (CCg), an FGF co-factor that stimulates proliferation of neural and fibroblast associated undifferentiated cells. The N-glycosylation of cystatin C is required for its activity. Moreover, CCg acts in cooperation with basic fibroblast growth factor (FGF-2) to induce neural progenitor cell proliferation.

12 Claims, 18 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Description](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

133. Document ID: US 6399369 B1

L13: Entry 133 of 169

File: USPT

Jun 4, 2002

US-PAT-NO: 6399369

DOCUMENT-IDENTIFIER: US 6399369 B1

TITLE: Multipotent neural stem cell cDNA libraries

DATE-ISSUED: June 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Reynolds; Brent	Saltspring			CA

US-CL-CURRENT: 435/320.1; 435/368, 435/6, 435/91.1, 536/23.1, 536/23.5

ABSTRACT:

cDNA libraries may be obtained from neural cell cultures produced by using growth factors to induce the proliferation of multipotent neural stem cells. The libraries may be obtained from both cultured normal and dysfunctional neural cells and from neural cell cultures at various stages of development. This information allows for the identification of the sequence of gene expression during neural development and can be used to reveal the effects of biological agents on gene expression in neural cells. Additionally, nucleic acid derived from dysfunctional tissue can be compared with that of normal tissue to identify genetic material, which may be a cause of the dysfunction. This information could then be used in the design of therapies to treat the neurological disorder. A further use of the technology would be in the diagnosis of genetic disorders or for use in identifying neural cells at a particular stage in development.

5 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Description](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

134. Document ID: US 6395546 B1

L13: Entry 134 of 169

File: USPT

May 28, 2002

US-PAT-NO: 6395546

DOCUMENT-IDENTIFIER: US 6395546 B1

TITLE: Generation of dopaminergic neurons from human nervous system stem cells

DATE-ISSUED: May 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zobel; Rita	Tartu			EE
Levesque; Michel F.	Beverly Hills	CA		

US-CL-CURRENT: 435/377; 435/368

ABSTRACT:

The present invention relates to methods for generating dopaminergic neurons *in vitro* from embryonic and adult central nervous system cells. Specifically, these cells are isolated, cultured *in vitro* and stimulated to differentiate into dopaminergic neurons by down-regulating COUP-TFI and/or COUP-TFII expression or increasing NOT1 expression. These newly generated dopaminergic neurons may serve as an excellent source for cell replacement therapy in neurological disorders in which the dopaminergic system is compromised.

9 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Draw](#) | [Claims](#) | [KMC](#) | [Draw Desc](#)

135. Document ID: US 6392118 B1

L13: Entry 135 of 169

File: USPT

May 21, 2002

US-PAT-NO: 6392118

DOCUMENT-IDENTIFIER: US 6392118 B1

TITLE: Mx-1 conditionally immortalized cells

DATE-ISSUED: May 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Messing; Albee	Madison	WI		

US-CL-CURRENT: 800/14; 424/93.21, 435/320.1, 435/325, 435/455, 800/25

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution

within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

12 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Edit](#) | [Print](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

136. Document ID: US 6368854 B2

L13: Entry 136 of 169

File: USPT

Apr 9, 2002

US-PAT-NO: 6368854

DOCUMENT-IDENTIFIER: US 6368854 B2

TITLE: Hypoxia mediated neurogenesis

DATE-ISSUED: April 9, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Sorokan; S. Todd	Victoria			CA

US-CL-CURRENT: 435/325; 424/85.1, 435/367, 435/375, 435/378, 514/2

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

3 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Edit](#) | [Print](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

137. Document ID: US 6312949 B1

L13: Entry 137 of 169

File: USPT

Nov 6, 2001

US-PAT-NO: 6312949

DOCUMENT-IDENTIFIER: US 6312949 B1

TITLE: Regulation of tyrosine hydroxylase expression

DATE-ISSUED: November 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sakurada; Kazuhiro	San Diego	CA		
Palmer; Theo	San Diego	CA		
Gage; Fred H.	La Jolla	CA		

US-CL-CURRENT: 435/325; 435/183, 435/189, 435/368, 435/455, 435/6, 435/69.1, 536/23.1

ABSTRACT:

The invention relates to methods and materials involved in the regulation of tyrosine hydroxylase expression as well as the treatment of catecholamine-related diseases. Specifically, the invention provides cells that contain exogenous nucleic acid having a nucleic acid sequence that encodes Nurrl as well as methods and materials for inducing tyrosine hydroxylase expression, treating catecholamine-related deficiencies, and identifying tyrosine hydroxylase-related deficiencies.

10 Claims, 19 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 15

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

138. Document ID: US 6294346 B1

L13: Entry 138 of 169

File: USPT

Sep 25, 2001

US-PAT-NO: 6294346

DOCUMENT-IDENTIFIER: US 6294346 B1

**** See image for Certificate of Correction ****

TITLE: Use of multipotent neural stem cells and their progeny for the screening of drugs and other biological agents

DATE-ISSUED: September 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Reynolds; Brent	Calgary			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 435/7.21; 435/368, 435/375, 435/377

ABSTRACT:

A culture method for determining the effect of a biological agent on multipotent neural stem cell progeny is provided. In the presence of growth factors, multipotent neural stem cells are induced to proliferate in culture. The multipotent neural stem cells may be obtained from normal neural tissue or from a donor afflicted with a

disease such as Alzheimer's Disease, Parkinson's Disease or Down's Syndrome. At various stages in the differentiation process of the multipotent neural stem cell progeny, the effects of a biological agent, such as a virus, protein, peptide, amino acid, lipid, carbohydrate, nucleic acid or a drug or pro-drug on cell activity are determined. Additionally, a method of screening the effects of biological agents on a clonal population of neural cells is provided. The technology provides an efficient method for the generation of large numbers of pre- and post-natal neural cells under controlled, defined conditions. The disclosed cultures provide an optimal source of normal and diseased neural cells at various developmental stages, which can be screened for potential side effects in addition to testing the action and efficacy of different biological agents.

12 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KM/C	Draw. Des.
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139. Document ID: US 6238922 B1

L13: Entry 139 of 169

File: USPT

May 29, 2001

US-PAT-NO: 6238922

DOCUMENT-IDENTIFIER: US 6238922 B1

TITLE: Use of collagenase in the preparation of neural stem cell cultures

DATE-ISSUED: May 29, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Uchida; Nobuko	Palo Alto	CA		

US-CL-CURRENT: 435/380; 435/368, 435/378, 435/381

ABSTRACT:

The invention provides a method for using collagenase to dissociate neural stem cells in neural stem cell cultures when passaging aggregated neural stem cells. The collagenase treatment results in an increased cell viability and an increased number of proliferated neural stem cells over time.

34 Claims, 1 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KM/C	Draw. Des.
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140. Document ID: US 6184035 B1

L13: Entry 140 of 169

File: USPT

Feb 6, 2001

US-PAT-NO: 6184035

DOCUMENT-IDENTIFIER: US 6184035 B1

TITLE: Methods for isolation and activation of, and control of differentiation from, skeletal muscle stem or progenitor cells

DATE-ISSUED: February 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csete; Marie	South Pasadena	CA		
Doyle; John	South Pasadena	CA		
Wold; Barbara	San Marino	CA		

US-CL-CURRENT: 435/377; 435/375

ABSTRACT:

The present invention provides a method of isolating, maintaining, and/or enriching for stem or progenitor cells derived from diverse organ or tissue sources. The invention specifically teaches that these can be accomplished by the controlled use of subatmospheric oxygen culture, and that the precise oxygen level or levels must be determined empirically and/or by reference to physiologic levels within intact functioning organ or tissue. In particular, culturing skeletal muscle progenitor cells in less than 12% oxygen conditions or under 1% oxygen level.

16 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

141. Document ID: US 6165783 A

L13: Entry 141 of 169

File: USPT

Dec 26, 2000

US-PAT-NO: 6165783

DOCUMENT-IDENTIFIER: US 6165783 A

TITLE: Erythropoietin-mediated neurogenesis

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Sorokan; S. Todd	Victoria			CA

US-CL-CURRENT: 435/325; 424/85.1, 435/367, 435/375, 435/378, 514/2

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

142. Document ID: US 6156572 A

L13: Entry 142 of 169

File: USPT

Dec 5, 2000

US-PAT-NO: 6156572

DOCUMENT-IDENTIFIER: US 6156572 A

TITLE: Bioartificial extracellular matrix containing hydrogel matrix derivatized with cell adhesive peptide fragment

DATE-ISSUED: December 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bellamkonda; Ravi	Boston	MA		
Ranieri; John P.	Lausanne			CH
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/395, 424/423, 424/488, 424/93.7, 435/177, 435/178, 435/325,
435/368, 435/397, 530/326, 530/328, 530/329, 530/402, 530/812, 530/813, 606/152

ABSTRACT:

A bioartificial extracellular matrix for use in tissue regeneration or replacement is provided by derivatizing a three-dimensional hydrogel matrix with a cell adhesive extracellular matrix protein or cell adhesive peptide fragment of the protein. Preferably, derivatizing is by covalent immobilization of a cell adhesive peptide fragment having the amino acid sequence, ArgGlyAsp, TyrIleGlySerArg or IleLysValAlaVal. Cartilage or tendon can be regenerated by implanting a matrix containing an adhesive peptide fragment that favors chondrocyte invasion. The matrix can be pre-seeded with cells, and tissue can be reconstituted in vitro and then implanted. A cell-seeded matrix can be encapsulated in a semi-permeable membrane to form a bioartificial organ. An agarose hydrogel matrix having an agarose concentration of 0.5-1.25% (w/v) and an average pore radius between 120 nm and 290 nm is preferred. A nerve guidance channel for use in regenerating severed nerve is prepared containing a tubular semi-permeable membrane having openings adapted to receive ends of a severed nerve, and an inner lumen containing the hydrogel matrix having a bound cell adhesive peptide fragment through which the nerve can regenerate.

8 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

143. Document ID: US 6117675 A

L13: Entry 143 of 169

File: USPT

Sep 12, 2000

US-PAT-NO: 6117675

DOCUMENT-IDENTIFIER: US 6117675 A

**** See image for Certificate of Correction ****

TITLE: Retinal stem cells

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
van der Kooy; Derek	Toronto			CA
McInnes; Roderick	Ontario			CA
Chiasson; Bernard	York			CA
Tropepe; Vincenzo	Toronto			CA

US-CL-CURRENT: 435/354; 435/366, 435/377, 435/379, 435/384, 435/385, 435/455

ABSTRACT:

The invention relates to stem cells isolated from the retina of mammals and retinal cells differentiated from these stem cells. The invention also relates to a method of isolating retinal stem cells and inducing retinal stem cells to produce retinal cells. Retinal stem cells may also be induced *in vivo* to produce retinal cells. The invention also includes pharmaceuticals made with retinal stem cells or retinal cells which may be used to restore vision lost due to diseases, disorders or abnormal physical states of the retina. The invention includes retinal stem cell and retinal cell culture systems for toxicological assays, for isolating genes involved in retinal differentiation or for developing tumor cell lines.

17 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Edit](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

144. Document ID: US 6103530 A

L13: Entry 144 of 169

File: USPT

Aug 15, 2000

US-PAT-NO: 6103530

DOCUMENT-IDENTIFIER: US 6103530 A

**** See image for Certificate of Correction ****

TITLE: Cultures of human CNS neural stem cells

DATE-ISSUED: August 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Lincoln	RI		

US-CL-CURRENT: 435/405; 435/325, 435/368, 435/377, 435/384, 435/387, 435/389,
435/404, 435/406

ABSTRACT:

Isolation, characterization, proliferation, differentiation and transplantation of mammalian neural stem cells is disclosed.

2 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Desc.](#)

145. Document ID: US 6093531 A

L13: Entry 145 of 169

File: USPT

Jul 25, 2000

US-PAT-NO: 6093531

DOCUMENT-IDENTIFIER: US 6093531 A

TITLE: Generation of hematopoietic cells from multipotent neural stem cells

DATE-ISSUED: July 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bjornson; Christopher R.	Seattle	WA		
Rietze; Rod L.	Brunswick			AU
Reynolds; Brent A.	Saltspring			CA
Vescovi; Angelo L.	Milan			IT

US-CL-CURRENT: 435/1.1; 424/93.21, 435/325

ABSTRACT:

Multipotent neural stem cell (MNSC) progeny are induced to generate cells of the hematopoietic system by placing the MNSC progeny in a hematopoietic-inducing environment. The hematopoietic-inducing environment can be either *ex vivo* or *in vivo*. A mammal's circulatory system provides an *in vivo* environment that can induce xenogeneic, allogeneic, or autologous MNSC progeny to generate a full complement of hematopoietic cells. Transplantation of MNSC progeny provides an alternative to bone marrow and hematopoietic stem cell transplantation to treat blood-related disorders.

16 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Desc.](#)

146. Document ID: US 6040180 A

L13: Entry 146 of 169

File: USPT

Mar 21, 2000

US-PAT-NO: 6040180

DOCUMENT-IDENTIFIER: US 6040180 A

TITLE: In vitro generation of differentiated neurons from cultures of mammalian multipotential CNS stem cells

DATE-ISSUED: March 21, 2000

INVENTOR-INFORMATION:

NAME Johe; Karl K.	CITY Potomac	STATE MD	ZIP CODE	COUNTRY
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US-CL-CURRENT: 435/377; 435/325, 435/353, 435/368

ABSTRACT:

The present invention reveals in vitro cultures of region-specific, terminally differentiated, mature neurons derived from cultures of mammalian multipotential CNS stem cells and an in vitro procedure by which the differentiated neurons may be generated. The procedure involves the culturing of multipotential CNS stem cells from a specific region in a chemically defined serum-free culture medium containing a growth factor; replacing the medium with growth factor-free medium; harvesting the stem cells by trypsinization; plating the stem cells at a density of between 100,000 to 250,000 cells per square centimeter; and culturing the stem cells in a glutamic acid-free chemically defined serum-free culture medium.

6 Claims, 80 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 23

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Edit](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

147. Document ID: US 6033906 A

L13: Entry 147 of 169

File: USPT

Mar 7, 2000

US-PAT-NO: 6033906

DOCUMENT-IDENTIFIER: US 6033906 A

TITLE: Methods for differentiating neural stem cells to glial cells using neuregulins

DATE-ISSUED: March 7, 2000

INVENTOR-INFORMATION:

NAME Anderson; David J.	CITY Altadena	STATE CA	ZIP CODE	COUNTRY
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US-CL-CURRENT: 435/325; 435/353, 435/368

ABSTRACT:

Method for producing a population of mammalian glial cells comprising contacting at least one mammalian neural stem cell with a culture medium containing a neuregulin and detecting the differentiation of stem cell to a population of glial cells.

17 Claims, 60 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 22

148. Document ID: US 6001654 A

L13: Entry 148 of 169

File: USPT

Dec 14, 1999

US-PAT-NO: 6001654

DOCUMENT-IDENTIFIER: US 6001654 A

**** See image for Certificate of Correction ****

TITLE: Methods for differentiating neural stem cells to neurons or smooth muscle cells using TGT-.beta. super family growth factors

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Shah; Nirao M.	New York	NY		

US-CL-CURRENT: 435/377; 435/325, 435/352, 435/353, 435/368, 435/375

ABSTRACT:

Method for producing a population of mammalian neurons and/or smooth muscle cells comprising contacting at least one mammalian neural stem cell with a culture medium containing one or more growth factors from the TGF-.beta. super family and detecting the differentiation of stem cell to a population of neurons or smooth muscle cells.

22 Claims, 25 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 28

149. Document ID: US 5981165 A

L13: Entry 149 of 169

File: USPT

Nov 9, 1999

US-PAT-NO: 5981165

DOCUMENT-IDENTIFIER: US 5981165 A

TITLE: In vitro induction of dopaminergic cells

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA

US-CL-CURRENT: 435/4; 424/93.7, 435/325, 514/2, 530/399

ABSTRACT:

A culture method for inducing the expression of tyrosine hydroxylase in neural cells is provided. Mammalian CNS neural cells are cultured in the presence of a fibroblast growth factor and at least one selected from a member of the transforming growth factor beta family, a feeder layer bed of cells, and cell conditioned medium. Cells cultured as provided above may be transplanted to provide dopaminergic cells to a patient. The cells may also be used in methods for drug screening.

41 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

150. Document ID: US 5980885 A

L13: Entry 150 of 169

File: USPT

Nov 9, 1999

US-PAT-NO: 5980885

DOCUMENT-IDENTIFIER: US 5980885 A

TITLE: Growth factor-induced proliferation of neural precursor cells in vivo

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA

US-CL-CURRENT: 424/93.21; 424/93.1, 424/93.2, 435/325, 435/360, 435/366, 435/368,
435/377, 435/383, 435/384, 435/440, 435/455, 435/456, 435/457, 514/2, 514/44

ABSTRACT:

A method is described for inducing in vivo proliferation of precursor cells located in mammalian neural tissue by administering to the mammal a fibroblast growth factor and at least one additional growth factor selected from the group consisting of epidermal growth factor, transforming growth factor alpha, and amphiregulin. The method can be used to replace damaged or missing neurons and/or glia. Another method is described for transplanting multipotent neural stem cell progeny into a mammal. The method comprises the steps of administering growth factors to a mammal to induce in vivo proliferation of neural precursor cells, removing the precursor cell progeny from the mammal, culturing the removed cells in vitro in the presence of one or more growth factors that induces multipotent neural stem cell proliferation, and implanting the multipotent neural stem cell progeny into the mammal.

11 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

151. Document ID: US 5968829 A

L13: Entry 151 of 169

File: USPT

Oct 19, 1999

US-PAT-NO: 5968829

DOCUMENT-IDENTIFIER: US 5968829 A

TITLE: Human CNS neural stem cells

DATE-ISSUED: October 19, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Lincoln	RI		

US-CL-CURRENT: 435/467; 424/93.7, 435/368, 435/377

ABSTRACT:

Isolation, characterization, proliferation, differentiation and transplantation of mammalian neural stem cells is disclosed.

13 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMPC	Draw. Des.
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152. Document ID: US 5958767 A

L13: Entry 152 of 169

File: USPT

Sep 28, 1999

US-PAT-NO: 5958767

DOCUMENT-IDENTIFIER: US 5958767 A

TITLE: Engraftable human neural stem cells

DATE-ISSUED: September 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 435/455

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established

migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

3 Claims, 43 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

153. Document ID: US 5935849 A

L13: Entry 153 of 169

File: USPT

Aug 10, 1999

US-PAT-NO: 5935849

DOCUMENT-IDENTIFIER: US 5935849 A

TITLE: Methods and compositions of growth control for cells encapsulated within bioartificial organs

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Bristol	RI		
Shoichet; Molly S.	Canton	MA		
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Providence	RI		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/325; 435/375, 435/377, 435/400

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth

surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

7 Claims, 8 Drawing figures

Exemplary Claim Number: 1,5

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

154. Document ID: US 5928947 A

L13: Entry 154 of 169

File: USPT

Jul 27, 1999

US-PAT-NO: 5928947

DOCUMENT-IDENTIFIER: US 5928947 A

TITLE: Mammalian multipotent neural stem cells

DATE-ISSUED: July 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/455; 424/93.7, 435/325, 435/440, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

6 Claims, 20 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 22

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

155. Document ID: US 5861283 A

US-PAT-NO: 5861283

DOCUMENT-IDENTIFIER: US 5861283 A

TITLE: DNA encoding a limbic system-associated membrane protein

DATE-ISSUED: January 19, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Levitt; Pat Ressler	Wyncote	PA		
Pimenta; Aurea	Princeton	NJ		
Fischer; Itzhak	Blue Bell	PA		
Zhukareva; Victoria	Philadelphia	PA		

US-CL-CURRENT: 435/69.4; 435/252.3, 435/320.1, 435/325, 536/23.1, 536/23.51, 536/24.1

ABSTRACT:

The present invention is directed to nucleic acid sequences encoding a limbic-system associated membrane protein ("LAMP") and to purified proteins with LAMP activity. LAMP is a self-binding, antibody-like cell surface adhesion protein, the presence of which on one neuron of the limbic system stimulates the formation of connections with adjacent neurons. The invention provides a nucleic acid sequence encoding a polypeptide with at least about 90% homology to a LAMP self-binding domain, and corresponding proteins. The invention also provides nucleic acids that hybridize to LAMP encoding nucleic acids.

16 Claims, 11 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KMTC	Drawn Desc
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 156. Document ID: US 5858747 A

L13: Entry 156 of 169

File: USPT

Jan 12, 1999

US-PAT-NO: 5858747

DOCUMENT-IDENTIFIER: US 5858747 A

TITLE: Control of cell growth in a bioartificial organ with extracellular matrix coated microcarriers

DATE-ISSUED: January 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		

Cain; Brian M.	Everett	MA
Doherty; Edward J.	Mansfield	MA
Winn; Shelley R.	Smithfield	RI
Aebischer; Patrick	Lutry	CH

US-CL-CURRENT: 435/182; 424/422, 424/93.21, 424/93.7, 435/176, 435/177, 435/178,
435/289.1, 435/377, 435/382, 435/395, 435/403

ABSTRACT:

Methods and compositions are provided for controlling cell distribution within an implantable bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the bioartificial organ with extracellular matrix molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination. The bioartificial organ typically has a semipermeable membrane encapsulating a cell-containing core, and is preferably immunoisolatory. Cells can be grown on microcarriers and then loaded into the bioartificial organ. The microcarriers may be coated with an extracellular matrix component such as collagen to cause decreased cell proliferation or increased cell differentiation. Microcarriers containing cells can be suspended in a proliferation inhibiting hydrogel matrix prior to encapsulation.

11 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Draw](#) | [Claims](#) | [KOMC](#) | [Draw Desc](#)

157. Document ID: US 5851832 A

L13: Entry 157 of 169

File: USPT

Dec 22, 1998

US-PAT-NO: 5851832

DOCUMENT-IDENTIFIER: US 5851832 A

TITLE: In vitro growth and proliferation of multipotent neural stem cells and their progeny

DATE-ISSUED: December 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 435/368; 435/325, 435/366, 435/377, 435/383, 435/384

ABSTRACT:

A method for the in vitro proliferation and differentiation of neural stem cells and stem cell progeny comprising the steps of (a) isolating the cells from a mammal, (b) exposing the cells to a culture medium containing a growth factor, (c) inducing the cells to proliferate, and (d) inducing the cells to differentiate is provided.

80 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Drawn Desc
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158. Document ID: US 5849553 A

L13: Entry 158 of 169

File: USPT

Dec 15, 1998

US-PAT-NO: 5849553

DOCUMENT-IDENTIFIER: US 5849553 A

TITLE: Mammalian multipotent neural stem cells

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/467; 435/320.1, 435/325, 435/353, 435/368, 435/455, 435/462, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell, and immortalized cell lines which are capable of subsequent disimmortalization. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

25 Claims, 111 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 44

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Drawn Desc
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159. Document ID: US 5843431 A

US-PAT-NO: 5843431

DOCUMENT-IDENTIFIER: US 5843431 A

TITLE: Controlling proliferation of cells before and after encapsulation in a bioartificial organ by gene transformation

DATE-ISSUED: December 1, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 424/93.21; 424/422, 424/93.7, 435/174, 435/178, 435/377, 435/382,
435/395, 435/467

ABSTRACT:

Methods and compositions are provided for controlling cell distribution within an implantable bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the bioartificial organ with extracellular matrix molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination. Cells can be transformed with a proliferation-promoting gene such as the oncogene, SV40, linked to a regulatable promoter such as the Mx1 promoter, the promotor is activated in vitro to express the gene to result in cell proliferation, and the promotor is inactivated before or after insertion of the cells in the bioartificial organ to inhibit expression of the gene to reduce or stop cell proliferation in vivo. The promoter can be reactivated in vivo to again express the gene to result in further cell proliferation. The gene may be a proliferation-suppressing gene such as p53 gene or RB gene, or a differentiation-inducing gene such as high mobility group chromosomal protein 14. Inhibiting gene expression in vitro causes cell proliferation, and inducing gene expression reduces or stops cell proliferation in vivo.

10 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

160. Document ID: US 5840576 A

L13: Entry 160 of 169

File: USPT

Nov 24, 1998

US-PAT-NO: 5840576

DOCUMENT-IDENTIFIER: US 5840576 A

TITLE: Methods and compositions of growth control for cells encapsulated within bioartificial organs

DATE-ISSUED: November 24, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/325; 435/375, 435/377, 435/400

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

4 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

161. Document ID: US 5834029 A

L13: Entry 161 of 169

File: USPT

Nov 10, 1998

US-PAT-NO: 5834029

DOCUMENT-IDENTIFIER: US 5834029 A

TITLE: Nerve guidance channel containing bioartificial three-dimensional hydrogel extracellular matrix derivatized with cell adhesive peptide fragment

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bellamkonda; Ravi	Boston	MA		
Ranieri; John P.	Lausanne			CH
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 424/570; 424/93.7, 435/177, 435/178, 435/368, 435/395, 435/397,
435/402, 530/326, 530/328, 530/329, 530/402, 606/152

ABSTRACT:

A bioartificial three-dimensional hydrogel extracellular matrix derivatized with a cell adhesive peptide fragment is provided for use in tissue regeneration or replacement. The choice of adhesive peptide fragment depends on the desired target cell type. Cartilage or tendon can be regenerated by implanting a matrix containing adhesive peptide fragments that favor chondrocyte invasion. The matrix can be pre-seeded with cells, and tissue can be reconstituted in vitro and then implanted. A cell-seeded matrix can be encapsulated in a semi-permeable membrane to form a bioartificial organ. An agarose hydrogel matrix having an agarose concentration of 0.5-1.25% (w/v) and an average gel pore radius between 120 nm and 290 nm is preferred. The peptide fragment preferably contains the sequence, ArgGlyAsp or TyrIleGlySerArg or IleLysValAlaVal, and is covalently immobilized to the matrix. A nerve guidance channel for use in regenerating severed nerve is prepared containing a tubular semi-permeable membrane having openings adapted to receive the ends of a severed nerve, and an inner lumen containing the matrix having an adhesive peptide fragment through which the nerve can regenerate.

9 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

162. Document ID: US 5833979 A

L13: Entry 162 of 169

File: USPT

Nov 10, 1998

US-PAT-NO: 5833979

DOCUMENT-IDENTIFIER: US 5833979 A

TITLE: Methods and compositions of growth control for cells encapsulated within
bioartificial organs

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		

Doherty; Edward J.	Mansfield	MA
Winn; Shelley R.	Smithfield	RI
Aebischer; Patrick	Lutry	CH

US-CL-CURRENT: 424/93.21; 424/553, 424/556, 435/174, 435/352

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

2 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KOMC](#) | [Draw Desc](#)

163. Document ID: US 5824489 A

L13: Entry 163 of 169

File: USPT

Oct 20, 1998

US-PAT-NO: 5824489

DOCUMENT-IDENTIFIER: US 5824489 A

TITLE: In vitro method for obtaining an isolated population of mammalian neural crest stem cells

DATE-ISSUED: October 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Pasadena	CA		

US-CL-CURRENT: 435/7.21; 435/325, 435/375, 435/377, 435/378, 435/395, 435/402

ABSTRACT:

The invention includes methods for the isolation and clonal propagation of mammalian neural stem cells. The methods employ a novel separation and culturing regimen and bioassays for establishing the generation of neural stem cell derivatives. These methods result in the production of non-transformed neural stem cells and their progeny. The invention demonstrates, at the clonal level, the self regeneration and asymmetrical division of mammalian neural stem cells for the first time in feeder cell-independent cultures. Lineage restriction is demonstrated within a developing clone and is shown to be sensitive to the local environment. Multipotent neural stem cells cultured on a mixed substrate of poly-D-lysine and fibronectin generate PNS neurons and glia, but on fibronectin alone the stem cells generate PNS glia but not

neurons. The neurogenic potential of the stem cells, while not expressed, is maintained over time on fibronectin. The invention further includes transplantation assays which allow for the identification of mammalian neural stem cells from various tissues. It also includes methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals.

21 Claims, 48 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 16

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Advanced Search](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

164. Document ID: US 5753506 A

L13: Entry 164 of 169

File: USPT

May 19, 1998

US-PAT-NO: 5753506

DOCUMENT-IDENTIFIER: US 5753506 A

TITLE: Isolation propagation and directed differentiation of stem cells from embryonic and adult central nervous system of mammals

DATE-ISSUED: May 19, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johe; Karl K.	Potomac	MD		

US-CL-CURRENT: 435/377; 435/325, 435/366, 435/368

ABSTRACT:

The present invention reveals an in vitro procedure by which a homogeneous population of multipotential precursor cells from mammalian embryonic neuroepithelium (CNS stem cells) can be expanded up to 10.^{sup.9} fold in culture while maintaining their multipotential capacity to differentiate into neurons, oligodendrocytes, and astrocytes. Chemically defined conditions are presented that enable a large number of neurons, up to 50% of the expanded cells, to be derived from the stem cells. In addition, four factors--PDGF, CNTF, LIF, and T3--have been identified which, individually, generate significantly higher proportions of neurons, astrocytes, or oligodendrocytes. These defined procedures permit a large-scale preparation of the mammalian CNS stem cells, neurons, astrocytes, and oligodendrocytes under chemically defined conditions with efficiency and control. These cells should be an important tool for many cell- and gene-based therapies for neurological disorders.

16 Claims, 46 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 11

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Advanced Search](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

165. Document ID: US 5750376 A

L13: Entry 165 of 169

File: USPT

May 12, 1998

TITLE: In vitro growth and proliferation of genetically modified multipotent neural stem cells and their progeny

DATE-ISSUED: May 12, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 435/69.52; 435/325, 435/368, 435/377, 435/384, 435/392, 435/395,
435/455, 435/456, 435/458, 435/461, 435/69.1

ABSTRACT:

A method for producing genetically modified neural cells comprises culturing cells derived from embryonic, juvenile, or adult mammalian neural tissue with one or more growth factors that induce multipotent neural stem cells to proliferate and produce multipotent neural stem cell progeny which include more daughter multipotent neural stem cells and undifferentiated progeny that are capable of differentiating into neurons, astrocytes, and oligodendrocytes. The proliferating neural cells can be transfected with exogenous DNA to produce genetically modified neural stem cell progeny. The genetic modification can be for the production of biologically useful proteins such as growth factor products, growth factor receptors, neurotransmitters, neurotransmitter receptors, neuropeptides and neurotransmitter synthesizing genes. The multipotent neural stem cell progeny can be continuously passaged and proliferation reinitiated in the presence of growth factors to result in an unlimited supply of neural cells for transplantation and other purposes. Culture conditions can be provided that induce the genetically modified multipotent neural stem cell progeny to differentiate into neurons, astrocytes, and oligodendrocytes in vitro.

40 Claims, 9 Drawing figures

Exemplary Claim Number: 1,8,9

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

166. Document ID: US 5672499 A

L13: Entry 166 of 169

File: USPT

Sep 30, 1997

TITLE: Immortalized neural crest stem cells and methods of making

DATE-ISSUED: September 30, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		

US-CL-CURRENT: 435/353; 435/320.1, 435/325, 435/368, 435/467, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

8 Claims, 62 Drawing figures

Exemplary Claim Number: 1,2

Number of Drawing Sheets: 23

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KUMC](#) | [Draw. Des.](#)

 167. Document ID: US 5656481 A

L13: Entry 167 of 169

File: USPT

Aug 12, 1997

US-PAT-NO: 5656481

DOCUMENT-IDENTIFIER: US 5656481 A

TITLE: Compositions and methods for the delivery of biologically active molecules using cells contained in biocompatible capsules

DATE-ISSUED: August 12, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 435/325; 424/93.1, 424/93.2, 424/93.21, 424/93.3, 424/93.7, 435/347,
435/373, 435/382

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells

transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

9 Claims, 14 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KUMC](#) | [Draw. Des.](#)

168. Document ID: US 5654183 A

L13: Entry 168 of 169

File: USPTO

Aug 5, 1997

US-PAT-NO: 5654183

DOCUMENT-IDENTIFIER: US 5654183 A

TITLE: Genetically engineered mammalian neural crest stem cells

DATE-ISSUED: August 5, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/456; 435/320.1, 435/325, 435/353, 435/368, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

17 Claims, 62 Drawing figures

Exemplary Claim Number: 1,4

Number of Drawing Sheets: 23

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KUMC](#) | [Draw. Des.](#)

169. Document ID: US 5639275 A

US-PAT-NO: 5639275

DOCUMENT-IDENTIFIER: US 5639275 A

TITLE: Delivery of biologically active molecules using cells contained in biocompatible immunoisolatory capsules

DATE-ISSUED: June 17, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 604/891.1; 424/422, 424/424, 424/93.1, 424/93.2, 435/325

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

6 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KMM](#) [Drawn Desc](#)

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Terms	Documents
L12 AND neural stem cell	169

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1. Document ID: US 20040241839 A1

Using default format because multiple data bases are involved.

L16: Entry 1 of 235

File: PGPB

Dec 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040241839

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040241839 A1

TITLE: Culturing neural stem cells

PUBLICATION-DATE: December 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Svetlov, Stanislav I.	Gainesville	FL	US	
Kukekov, Valery G.	Gainesville	FL	US	

US-CL-CURRENT: 435/368; 435/354, 514/54

[Full](#) [Title](#) [Citation](#) [Pro](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Draw. Des.](#)

2. Document ID: US 20040241170 A1

L16: Entry 2 of 235

File: PGPB

Dec 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040241170

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040241170 A1

TITLE: Isolation of cells from neural cell populations using antibodies to fal/dlk1

PUBLICATION-DATE: December 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jensen, Charlotte Harken	Svendborg		DK	
Teisner, Borge	Odense		DK	
Gronborg, Mette	Ballerup		DK	
Wahlberg, Lars U	Ballerup		DK	

US-CL-CURRENT: 424/178.1

ABSTRACT:

The present invention relates to the use of antibodies recognising Fetal Antigen-1 (FA1/dlk1) for the detection and isolation of cell subpopulations from neural cell populations, in particular from cell populations from the central nervous system. In one embodiment, the dopaminergic neurons in the Substantia nigra pars compacta are detected and separated from other cell populations in this region of the brain. In another embodiment, neural stem and progenitor cells are isolated from other more committed cells in the CNS. The isolated cells may be used for transplantation, drug screening, production of cell type specific antibodies, and gene discovery.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) **Review** | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Desc](#)

3. Document ID: US 20040235720 A1

L16: Entry 3 of 235

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235720

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040235720 A1

TITLE: Use of osteopontin for the treatment and/or prevention of neurologic diseases

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Boschert, Ursula	Troinex		CH	
Feger, Georg	Thoiry		FR	
Selvaraju, Raghuram	Vandoeuvres		CH	
Bernasconi, Lilia	Perly		CH	
Papoian, Ruben	Nyon		CH	

US-CL-CURRENT: 514/12

ABSTRACT:

The invention relates to the use of osteopontin, or of an agonist of osteopontin activity, for treatment or prevention of a neurologic diseases.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) **Review** | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Desc](#)

4. Document ID: US 20040235166 A1

L16: Entry 4 of 235

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235166

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040235166 A1

TITLE: Enhanced growth of adult stem cells

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

NAME	CITY	STATE	COUNTRY	RULE-47
Prockop, Darwin	Philadelphia	PA	US	
Sekiya, Ichiro	Tokyo	LA	JP	
Gregory, Carl	New Orleans	LA	US	
Spees, Jeffrey	New Orleans	LA	US	
Smith, Jason	New Orleans	LA	US	
Pochampally, Radhika	Marrero		US	

US-CL-CURRENT: 435/377; 435/325, 435/372, 435/384, 435/405

ABSTRACT:

The present invention encompasses methods and compositions for enhancing the growth of adult marrow stromal cells.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) **Review** | Classification | Date | Reference | Sequences | Attachments | Claims | KMMC | Draw. Des.

5. Document ID: US 20040235159 A1

L16: Entry 5 of 235

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235159

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040235159 A1

TITLE: Medium for growing human embryonic stem cells

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandalam, Ramkumar	Union City	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/404

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem cells. Traditionally, pluripotent stem cells are cultured on a layer of feeder cells (such as mouse embryonic fibroblasts) to prevent them from differentiating. In the system described here, the role of feeder cells is replaced by components added to the culture environment that support rapid proliferation without differentiation. Effective features are a suitable support structure for the cells, and an effective medium that can be added fresh to the culture without being preconditioned by another cell type. Culturing human embryonic stem cells in fresh medium according to this invention causes the cells to expand surprisingly rapidly, while retaining the ability to differentiate into cells representing all three embryonic germ layers. This new culture system allows for bulk proliferation of pPS cells for commercial production of important products for use in drug screening and human therapy.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) **Review** | Classification | Date | Reference | Sequences | Attachments | Claims | KMMC | Draw. Des.

6. Document ID: US 20040235158 A1

L16: Entry 6 of 235

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235158
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040235158 A1

TITLE: Method of purification of cells

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bartlett, Perry Francis	North Carlton		AU	
Rietze, Rodney Lee	Brunswick		AU	

US-CL-CURRENT: 435/366

ABSTRACT:

The present invention relates generally to a method for the generation of a substantially homogeneous population of undifferentiated cells. More particularly, the present invention relates to the purification of a substantially homogeneous population of stem cells and their progenitor or precursor cells. Even more particularly, the present invention provides a population of neural stem cells (NSCs). The subject invention is particularly directed to NSCs and precursor cells in the capacity to differentiate into cells and cell lineages required for the development, maintenance or repair of the central nervous system in an animal such as a mammal. The present invention is further directed to NSCs and progenitor and/or precursor cells which are capable of proliferation and differentiation into multiple cell lineages, such as but not limited to neurons, oligodendrocytes, glia and astrocytes. The subject invention further contemplates the use of NSCs and/or precursor cells for the repair or regeneration of tissue, such as tissue associated with the central nervous system, in an animal including a mammal. The NSCs of the present invention may be used to identify naturally occurring molecules such as cytokines as well as molecules obtained from natural product screening or screening of chemical libraries which induce proliferation of the NSCs. Such molecules are useful in the development of therapies.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

7. Document ID: US 20040235000 A1

L16: Entry 7 of 235

File: PGPB

Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040235000
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040235000 A1

TITLE: Method for retrospective birth dating of biomolecules, cells, tissues, organs and organisms

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Spalding, Kirsty	Stockholm		SE	
Frisen, Jonas	Stockholm		SE	

US-CL-CURRENT: 435/6**ABSTRACT:**

This invention provides novel methods for the determining the birth dates or synthesis dates of biomolecules, organisms, cells, tissues and organs. Methods for determining the birth date of an organism by determining the birth date of a biomolecule of the organism are also provided.

Full	Title	Citation	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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 8. Document ID: US 20040229291 A1

L16: Entry 8 of 235

File: PGPB

Nov 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040229291

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040229291 A1

TITLE: Screening and therapeutic methods relating to neurogenesis

PUBLICATION-DATE: November 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zhou, Qun-Yong	Irvine	CA	US	
Cheng, Michelle Y.	Irvine	CA	US	

US-CL-CURRENT: 435/7.2; 514/12**ABSTRACT:**

The invention provides methods of identifying compounds that modulate neurogenesis. The methods involve providing a compound that modulates prokineticin receptor signaling; contacting a neural stem or progenitor cell with the compound; and determining the ability of the compound to modulate neurogenesis. The invention also provides methods for modulating neurogenesis. The methods involve contacting a neural stem or progenitor cell with an effective amount of a compound that modulates prokineticin receptor signaling. Such methods are useful for both ex vivo or in vivo therapeutic applications where neural regeneration is desirable.

Full	Title	Citation	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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 9. Document ID: US 20040224887 A1

L16: Entry 9 of 235

File: PGPB

Nov 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040224887

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040224887 A1

TITLE: Systems and methods for screening for modulators of neural differentiation

PUBLICATION-DATE: November 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jessel, Thomas	Bronx	NY	US	
Wichterle, Hynek	New York	NY	US	
Wilson, Sara I.	New York	NY	US	

US-CL-CURRENT: 514/12; 435/366, 435/4, 435/455

ABSTRACT:

The present invention provides in vitro systems for use in identifying modulators of neural differentiation. Also provided are modulators identified by these systems. The present invention further provides methods for identifying a modulator of neural differentiation, a modulator of a Wnt signalling pathway, a modulator of Wnt-dependent neural differentiation, a modulator of a BMP signalling pathway, a modulator of BMP-dependent neural differentiation, a modulator of a Hh signalling pathway, and a modulator of Hh-dependent neural differentiation. Also provided are modulators identified by these methods.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

10. Document ID: US 20040224302 A1

L16: Entry 10 of 235

File: PGPB

Nov 11, 2004

PGPUB-DOCUMENT-NUMBER: 20040224302
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040224302 A1

TITLE: Systems and methods for screening for modulators of neural differentiation

PUBLICATION-DATE: November 11, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jessel, Thomas	Bronx	NY	US	
Wichterle, Hynek	New York	NY	US	
Wilson, Sara	New York	NY	US	

US-CL-CURRENT: 435/4; 435/455, 514/12

ABSTRACT:

The present invention provides in vitro systems for use in identifying modulators of neural differentiation. Also provided are modulators identified by these systems. The present invention further provides methods for identifying a modulator of neural differentiation, a modulator of an FGF signalling pathway, a modulator of FGF-dependent neural differentiation, a modulator of a retinoid signalling pathway, and a

modulator of retinoid-dependent neural differentiation. Also provided are modulators identified by these methods.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Draw. Des.
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11. Document ID: US 20040214766 A1

L16: Entry 11 of 235

File: PGPB

Oct 28, 2004

PGPUB-DOCUMENT-NUMBER: 20040214766

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040214766 A1

TITLE: VEGF-C or VEGF-D materials and methods for treatment of neuropathologies

PUBLICATION-DATE: October 28, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Alitalo, Kari	Helsinki		FI	
Karkkainen, Marika	Helsinki		FI	
Haiko, Paula	Helsinki		FI	
Sainio, Kirsi	Helsinki		FI	
Wartiovaara, Kirmo	Helsinki		FI	

US-CL-CURRENT: 514/12

ABSTRACT:

The present invention relates to VEGF-C or VEGF-D materials and methods for promoting growth and differentiation of neural stem cells and materials and methods for administering said cells to inhibit neuropathology.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Draw. Des.
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12. Document ID: US 20040214332 A1

L16: Entry 12 of 235

File: PGPB

Oct 28, 2004

PGPUB-DOCUMENT-NUMBER: 20040214332

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040214332 A1

TITLE: Engraftable human neural stem cells

PUBLICATION-DATE: October 28, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Evan, Snyder Y.	La Jolla	CA	US	
Wolfe, John H.	Philadelphia	PA	US	
Kim, Seung U.	Vancouver		CA	

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

Full	Title	Citation	From Review	Classification	Date	Reference	Sequences	Attachments	Claims	KAMC	Drawn Des
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13. Document ID: US 20040214324 A1

L16: Entry 13 of 235

File: PGPB

Oct 28, 2004

PGPUB-DOCUMENT-NUMBER: 20040214324

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040214324 A1

TITLE: Dopaminergic neurons differentiated from embryonic cells for treating neurodegenerative diseases

PUBLICATION-DATE: October 28, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Isacson, Ole	Cambridge	MA	US	
Bjorklund, Lars	Stockholm		SE	

US-CL-CURRENT: 435/368

ABSTRACT:

Disclosed herein are methods for generating dopaminergic neurons in vitro by inhibiting a pathway component of a TGF-.beta. signaling pathway and overexpressing one or more cell fate-inducing polypeptides in pluripotent cells, causing differentiation of the pluripotent cells into dopaminergic neurons. Also disclosed

are methods for treating a neurodegenerative disease in a patient by generating dopaminergic neurons *in vitro*, and transplanting them into the brain of the patient, such that the dopaminergic neurons are sufficient to reduce or eliminate the symptoms of the neurodegenerative disease.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

14. Document ID: US 20040208858 A1

L16: Entry 14 of 235

File: PGPB

Oct 21, 2004

PGPUB-DOCUMENT-NUMBER: 20040208858

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040208858 A1

TITLE: Therapeutic uses for mesenchymal stromal cells

PUBLICATION-DATE: October 21, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Tennekoon, Gihan	Wynnewood	PA	US	
Coyle, Andrew J.	Phila.	PA	US	
Grinspan, Judith	Ardmore	PA	US	
Beesley, Jackie S.	London		GB	

US-CL-CURRENT: 424/93.21; 435/368

ABSTRACT:

Human mesenchymal stromal cells can be induced to differentiate into oligodendrocytes and neurons, respectively. For these cell types, therefore, MSCs can be a therapeutic source, either *in vitro* or *in vivo*, in the context of treating pathologies of the central nervous system which are characterized by neuron loss, such as Parkinson's disease, Alzheimer's disease and stroke, as well as head trauma, or by dysfunction in ganglioside storage or demyelinization, such as Tay-Sachs disease, G1 gangliosidosis, metachromatic leukodystrophy, and multiple sclerosis.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

15. Document ID: US 20040197317 A1

L16: Entry 15 of 235

File: PGPB

Oct 7, 2004

PGPUB-DOCUMENT-NUMBER: 20040197317

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040197317 A1

TITLE: Persistent expression of candidate molecule in proliferating stem and progenitor cells for delivery of therapeutic products

PUBLICATION-DATE: October 7, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rao, Mahendra S.	Timonium	MD	US	
Capecchi, Mario R.	Salt Lake City	UT	US	

US-CL-CURRENT: 424/93.21; 435/366, 435/455**ABSTRACT:**

A method of obtaining and the resulting isolated progenitor or stem cell population of proliferating cells persistently expressing a candidate molecule. Further, novel methods of ex vivo gene product (e.g., protein) production and treating symptoms of neurological or neurodegenerative disorders are also provided.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KM/C	Drawn Des.
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 16. Document ID: US 20040186052 A1

L16: Entry 16 of 235

File: PGPB

Sep 23, 2004

PGPUB-DOCUMENT-NUMBER: 20040186052

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040186052 A1

TITLE: Cytomodulating peptides and methods for treating neurological disorders

PUBLICATION-DATE: September 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Iyer, Suhasini	San Ramon	CA	US	
Buelow, Roland	Palo Alto	CA	US	
Lazarov, Mirella Emilia	Palo Alto	CA	US	
Fong, Timothy	Moraga	CA	US	

US-CL-CURRENT: 514/12**ABSTRACT:**

Compositions and methods are provided for inhibiting neuronal cell death and the loss of neuronal contacts resulting from acute and chronic neurological disorders, including neurodegenerative and neuroinflammatory diseases. The subject compositions and methods utilize RDP-58 compositions capable of providing a direct neuroprotective effect on neuronal cells in conjunction with the inhibition of autoimmune and inflammatory processes.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KM/C	Drawn Des.
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 17. Document ID: US 20040185429 A1

L16: Entry 17 of 235

File: PGPB

Sep 23, 2004

PGPUB-DOCUMENT-NUMBER: 20040185429
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040185429 A1

TITLE: Method for discovering neurogenic agents

PUBLICATION-DATE: September 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kelleher-Andersson, Judith	Columbia	MD	US	
Johe, Karl K.	Potomac	MD	US	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

A method for discovering neurogenic drugs is revealed. The method allows for systematic screening of test agents such as libraries of compounds. The method consists of exposing test agents to cultures of differentiating neural progenitor cells and measuring their effects on increasing the overall cell number and/or the number of neurons.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Description](#)

18. Document ID: US 20040171046 A1

L16: Entry 18 of 235

File: PGPB

Sep 2, 2004

PGPUB-DOCUMENT-NUMBER: 20040171046
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040171046 A1

TITLE: Method for monitoring the transition of a cell from one state into another

PUBLICATION-DATE: September 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Berlin, Kurt	Stahnsdorf		DE	
Olek, Alexander	Berlin		DE	
Olek, Sven	Berlin		DE	

US-CL-CURRENT: 435/6

ABSTRACT:

The method relates to the field of molecular biology and cell biology. More specifically it is concerned with monitoring a cell's transition from one state into another with the use of a genome based technology. The method is based on a sufficient analysis of methylation patterns according to said cell states. In addition it includes the actual transition of said cell itself. This is done by exposing a cell to conditions expected to convert it from one state to another.

19. Document ID: US 20040161419 A1

L16: Entry 19 of 235

File: PGPB

Aug 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040161419

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040161419 A1

TITLE: Placental stem cells and uses thereof

PUBLICATION-DATE: August 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Strom, Stephen C.	Allison Park	PA	US	
Miki, Toshio	Pittsburgh	PA	US	

US-CL-CURRENT: 424/93.21; 435/366

ABSTRACT:

The present invention features novel placental stem cells and provides methods and compositions for the therapeutic uses of placental stem cells or placental stem cells that have been induced to differentiate into a desired tissue type into a recipient host in amounts sufficient to result in production of the desired cell type, e.g., hepatocytes, neural cells, pancreatic cells, vascular endothelial cells, cardiomyocytes.

20. Document ID: US 20040161414 A1

L16: Entry 20 of 235

File: PGPB

Aug 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040161414

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040161414 A1

TITLE: Method of curing injured spinal cord and therapeutic agents for that

PUBLICATION-DATE: August 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kawaguchi, Saburo	Kyoto-shi		JP	
Nishio, Takeshi	Kyoto-shi		JP	

US-CL-CURRENT: 424/93.7

ABSTRACT:

A therapeutic agent for curing injured spinal cord, comprising as the active ingredients glial cells including type-1 and type-2 astrocytes progenitors, and oligodendrocytes progenitors which are CNS glial cells; and a method of curing spinal cord injury by injecting locally an effective dosage of glial cells into the injured spinal cord. It will restore the mobility of the SCI patients, and thereby will reduce physical and mental burdens of the patients and their family caregiver, and save a heavy burden of medical and social welfare costs.

[Full](#) | [Title](#) | [Citation](#) | [Fro Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

21. Document ID: US 20040152885 A1

L16: Entry 21 of 235

File: PGPB

Aug 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040152885

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040152885 A1

TITLE: Lp mammalian proteins; related reagents

PUBLICATION-DATE: August 5, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Amegadzie, Bernard Yaovi	Malvern	PA	US	
Basinski, Margaret Barbara	Indianapolis	IN	US	
Scott, William L.	Indianapolis	IN	US	
Chen, Dayue	Carmel	IN	US	
Huang, Chongxi	Indianapolis	IN	US	
Keleher, Gerald Patrick	Indianapolis	IN	US	
Perkins, Douglas Raymond	New Palestine	IN	US	
Rosteck, Paul Robert	Indianapolis	IN	US	
Rowlinson, Scott William	Indianapolis	IN	US	
Sankhavaram, Patanjali Raghavac	Carmel	IN	US	
Seno, Eugene Thomas	Weybridge	VT	US	
Su, Eric Wen	Carmel	IN	US	
Zhi, Yu	Indianapolis	IN	US	

US-CL-CURRENT: 536/23.5

ABSTRACT:

Isolated nucleic acid molecules encoding polypeptides from a human, reagents related thereto (including purified polypeptides specific antibodies) are provided. Methods of using said reagents and diagnostic kits are also provided.

[Full](#) | [Title](#) | [Citation](#) | [Fro Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

22. Document ID: US 20040152189 A1

L16: Entry 22 of 235

File: PGPB

Aug 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040152189

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040152189 A1

TITLE: Selective antibody targeting of undifferentiated stem cells

PUBLICATION-DATE: August 5, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
McWhir, Jim	Midlothian	CA	GB	
Gold, Joseph D.	San Francisco	CA	US	
Schiff, J. Michael	Menlo Park		US	

US-CL-CURRENT: 435/366; 435/455

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in expression of a cell-surface antigen that can be used to deplete the undifferentiated cells. Model effector sequences encode glycosyl transferases that synthesize carbohydrate xenoantigen or alloantigen, which can be used for immunoseparation or as a target for complement-mediated lysis. The differentiated cell populations produced are suitable for use in tissue regeneration and non-therapeutic applications such as drug screening.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [EPOC](#) | [Draw. Des.](#)

23. Document ID: US 20040151701 A1

L16: Entry 23 of 235

File: PGPB

Aug 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040151701

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040151701 A1

TITLE: Method for differentiating mesenchymal stem cells into neural cells

PUBLICATION-DATE: August 5, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kim, Hyun-Soo	Suwon-si, Kyungki-do		KR	
Yoon, Hae-Hoon	Incheon		KR	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

A method for differentiating mesenchymal stem cells of bone marrow into neural cells comprises culturing the mesenchymal stem cells in a medium containing epidermal

growth factor(EGF), basic fibroblast growth factor(bFGF) and hepatocyte growth factor (HGF), and the neural cells produced thereby can be employed for the treatment of a neural disease.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Des.](#)

24. Document ID: US 20040141946 A1

L16: Entry 24 of 235

File: PGPB

Jul 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040141946

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040141946 A1

TITLE: Methods of treating neurological conditions with hematopoietic growth factors

PUBLICATION-DATE: July 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Schaebitz, Wolf-Ruediger	Dossenheim		DE	
Schneider, Armin	Heidelberg		DE	
Krueger, Carola	Speyer		DE	
Sommer, Clemens	Guenzburg		DE	
Schwab, Stefan	Heidelberg		DE	
Kollmar, Rainer	Heidelberg		DE	
Maurer, Martin	Heidelberg		DE	
Weber, Daniela	Mannheim		DE	
Gassler, Nikolaus	Heidelberg		DE	

US-CL-CURRENT: 424/85.1; 424/85.2, 514/12

ABSTRACT:

The present invention relates to a method of treating neurological conditions in a mammal by administering a hematopoietic growth factor such as granulocyte-colony stimulating factor (GCSF) and granulocyte-macrophage colony stimulating factor (GMCSF). The invention also provides methods of screening for compounds that bind to a GCSF or GMCSF receptor found on the surface of a neuronal cell; and which provides a neuroprotective, neuroproliferative and/or a STAT gene activation activity.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Des.](#)

25. Document ID: US 20040137535 A1

L16: Entry 25 of 235

File: PGPB

Jul 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040137535

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040137535 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: July 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Uchida, Nobuko	Palo Alto	CA	US	
Capela, Alexandra	Mountain View	CA	US	

US-CL-CURRENT: 435/7.2; 435/368

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagents that bind to cell surface markers are provided.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

26. Document ID: US 20040136967 A1

L16: Entry 26 of 235

File: PGPB

Jul 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040136967

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040136967 A1

TITLE: Cultures, products and methods using stem cells

PUBLICATION-DATE: July 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Mark L.	Manhattan	KS	US	
Troyer, Deryl L.	Manhattan	KS	US	
Davis, Duane	Westmoreland	KS	US	
Mitchell, Kathy E.	Manhattan	KS	US	

US-CL-CURRENT: 424/93.7; 435/372

ABSTRACT:

Stem cells from human sources can have a variety of useful applications in disease treatment and biotechnology. More particularly the umbilical cord matrix cell cultures of the invention have a variety of totipotent, pluripotent, or multipotent cells for a variety of end uses from a non-controversial, universally available, species-specific source. The technology can have application to any amniotic animal, including agricultural and laboratory animals and humans. The invention relates to isolating the stem cells, culturing the stem cells, maintaining the stem cells, transforming the stem cells into useful cell types using genetic or other transformation technologies, stem cell and tissue banking and using untransformed or transformed cells in disease treatment.

27. Document ID: US 20040120932 A1

L16: Entry 27 of 235

File: PGPB

Jun 24, 2004

PGPUB-DOCUMENT-NUMBER: 20040120932

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040120932 A1

TITLE: In vitro-derived adult pluripotent stem cells and uses therefor

PUBLICATION-DATE: June 24, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zahner, Joseph Edward	Saint Louis	MO	US	

US-CL-CURRENT: 424/93.7; 435/366, 435/69.1, 514/50, 514/575

ABSTRACT:

Methods for deriving adult pluripotent stem cells from fully differentiated adult somatic cells by in vitro nuclear remodeling are provided. Cells cultured from a variety of tissue sources are treated in vitro to reverse the tissue specific epigenetic chromosomal changes associated with differentiation. Remodeled cells resemble embryonic stem cells by expressing telomerase and demonstrating pluripotency. The cells can be genetically modified to produce heterologous proteins or to correct for genetic defects. Methods for treating a human by implanting in vitro-derived adult pluripotent stem cells ("NUCREM.TM. cells") and generating engineered tissues for implantation are also disclosed. Advantages to this invention include the non-use of embryos to obtain an unlimited supply of stem cells for therapy and the ability to generate autologous cells and tissues for therapeutic use.

28. Document ID: US 20040107453 A1

L16: Entry 28 of 235

File: PGPB

Jun 3, 2004

PGPUB-DOCUMENT-NUMBER: 20040107453

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040107453 A1

TITLE: Multipotent adult stem cells, sources thereof, methods of obtaining same, methods of differentiation thereof, methods of use thereof and cells derived thereof

PUBLICATION-DATE: June 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Furcht, Leo T	Minneapolis	MN	US	
Verfaillie, Catherine M	St Paul	MN	US	

Reyes, Morayma

Minneapolis

MN

US

US-CL-CURRENT: 800/18; 424/93.7, 435/353, 435/354, 435/366, 800/21

ABSTRACT:

The present invention relates generally to mammalian multipotent adult stem cells (MASC), and more specifically to methods for obtaining, maintaining and differentiating MASC to cells of multiple tissue types. Uses of MASC in the therapeutic treatment of disease are also provided.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

29. Document ID: US 20040106197 A1

L16: Entry 29 of 235

File: PGPB

Jun 3, 2004

PGPUB-DOCUMENT-NUMBER: 20040106197

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040106197 A1

TITLE: Central nerve system precursor cells inducing synaptogenic neurons in spinal cord

PUBLICATION-DATE: June 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Okano, Hideyuki	Suita-shi		JP	
Ogawa, Yuhto	Kawasa-shi		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention provides central nervous system neural progenitor cells which can induce neurons with synapse forming ability, oligodendrocytes, astrocytes and the like when transplanted into an injured or disabled spinal cord, a method for preparing said central nervous system neural progenitor cells, a method for screening promoters or inhibitors of synapse formation using said central nervous system neural progenitor cells, a therapeutic drug to improve neural injuries or neural functions using said central nervous system neural progenitor cells, and the like. The central nervous system neural progenitor cells comprising neural stem cells derived from the spinal cord and cultured in the presence of cytokine, is transplanted into the injury site at a certain period after the spinal injury. The transplantation can induce neurons with synapse forming ability, oligodendrocytes, and astrocytes in the injury site, resulting in forming synapses between induced neurons and host neurons, and thus the injured spinal cord function is improved.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

30. Document ID: US 20040105847 A1

PGPUB-DOCUMENT-NUMBER: 20040105847
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20040105847 A1

TITLE: Promoting Recovery from Damage to the Central Nervous System

PUBLICATION-DATE: June 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Finklestein, Seth P.	Needham	MA	US	
Snyder, Evan Y.	Jamaica Plain	MA	US	

US-CL-CURRENT: 424/93.7; 514/12

ABSTRACT:

Methods, kits and compositions for improving a subject's recovery from CNS injury are disclosed. In certain aspects, a method may include administering to a subject cells and a neural stimulant. Recovery may be manifest by improvements in sensorimotor or cognitive abilities, e.g., improved limb movement and control or improved speech capability. In certain embodiments, subject methods can be used as part of a treatment for damage resulting from ischemia, hypoxia or trauma.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des.](#)

31. Document ID: US 20040103448 A1

L16: Entry 31 of 235

File: PGPB

May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040103448
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20040103448 A1

TITLE: Methods for inducing in vivo proliferation and migration of transplanted progenitor cells in the brain

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bjorklund, Anders	Lund		SE	

US-CL-CURRENT: 800/9; 435/368

ABSTRACT:

The present invention provides methods of inducing in vivo migration and proliferation of progenitor cells transplanted to the brain. Isolation, characterization, proliferation, differentiation and transplantation of mammalian neural stem cells are also disclosed.

32. Document ID: US 20040101518 A1

L16: Entry 32 of 235

File: PGPB

May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040101518

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040101518 A1

TITLE: Guided development and support of hydrogel-cell compositions

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Vacanti, Charles A.	Uxbridge	MA	US	
Vacanti, Joseph P.	Winchester	MA	US	
Vacanti, Martin P.	Westborough	MA	US	

US-CL-CURRENT: 424/93.7; 424/426

ABSTRACT:

The invention features a method for generating new tissue by obtaining a liquid hydrogel-cell composition including a hydrogel and tissue precursor cells; delivering the liquid hydrogel-cell composition into a permeable, biocompatible support structure; and allowing the liquid hydrogel-cell composition to solidify within the support structure and the tissue precursor cells to grow and generate new tissue. The invention also features a tissue forming structure including a permeable, biocompatible support structure having a predetermined shape that corresponds to the shape of desired tissue; and a hydrogel-cell composition at least partially filling the support structure, wherein the hydrogel-cell composition includes a hydrogel and tissue precursor cells. The new tissue forming structure can be used in new methods to generate various tissues (e.g., to treat defective tissue) including new bone, cartilage, and nervous tissue such as spinal cord tissue. The invention also new isolated nervous system stem cells.

33. Document ID: US 20040097534 A1

L16: Entry 33 of 235

File: PGPB

May 20, 2004

PGPUB-DOCUMENT-NUMBER: 20040097534

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040097534 A1

TITLE: Composition for the protection and regeneration of nerve cells containing berberine derivatives

PUBLICATION-DATE: May 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Choi, Byung-Kil	Seo-gu		KR	
Kim, Yun-Hee	Seoul		KR	
Kim, Soo-Kyung	Jung-gu		KR	
Lim, Jung-Su	Seoul		KR	
Kim, Hyo-Sup	Namdong-gu		KR	
Park, Dae-Sung	Seoul		KR	
Chang, Chi-Young	Bucheon-si		KR	

US-CL-CURRENT: 514/283

ABSTRACT:

Disclosed is a composition for protecting nerve cells, promoting nerve cell growth and regenerating nerve cells comprising berberine, derivatives thereof or pharmaceutically acceptable salts thereof. The composition has protective effects against apoptosis of neuronal stem cells and differentiated neuronal stem cells, an effect of inducing the regeneration of nerve cells, a regenerative effect on neurites, a neuroregenerative effect on central nerves and peripheral nerves, a reformation effect on neuromuscular junctions, and a protective effect against apoptosis of nerve cells and a neuroregenerative effect in animals suffering from dementia and brain ischemia. Therefore, the composition can be used as a therapeutic agent for the prevention and treatment of neurodegenerative diseases, ischemic nervous diseases or nerve injuries, and for the improvement of learning capability.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

34. Document ID: US 20040092448 A1

L16: Entry 34 of 235

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092448

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092448 A1

TITLE: Method of enhancing neural stem cell proliferation, differentiation, and survival using pituitary adenylate cyclase activating polypeptide (PACAP)

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ohta, Shigeki	Tokyo		JP	
Weiss, Samuel	Calgary		CA	

US-CL-CURRENT: 514/12

ABSTRACT:

The present invention relates to a method of increasing the number and/or differentiation of neural stem cells and/or neural stem cell progeny using pituitary adenylate cyclase-activating polypeptide (PACAP). In a preferred embodiment, additional growth factors are also utilized. The present invention can be practiced *in vivo* and *in vitro*, rendering it useful for the treatment of neurodegenerative disease and other neural trauma.

35. Document ID: US 20040092013 A1

L16: Entry 35 of 235

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092013

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092013 A1

TITLE: Method of treating alzheimer's disease with cell therapy

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Snyder, Evan Y.	La Jolla	CA	US	
Loring, Jeanne F.	Del Mar	CA	US	
Snable, Gary L.	Atherton	CA	US	
Aboody, Karen S.	Arcadia	CA	US	
Daadi, Marcel M.	Palo Alto	CA	US	

US-CL-CURRENT: 435/368; 424/93.7

ABSTRACT:

A method of treating Alzheimer's disease provides for administering NSC to a susceptible individual. Preferably the NSCs are administered intracisternally. Other administration routes are spinal injection, ventricular injection or systemic injection. Preferably, the quantity of NSC administered is in a range of about 400,000 to about 40,000,000. More preferably, the quantity of NSC is about 1,000,000 to about 10,000,000. The NSCs are administered at multiple locations. The NSCs can be administered to the neocortex or other affected areas of both hemispheres. The method of preventing further deterioration in cognitive function in a person diagnosed with Alzheimer's disease provides for administering NSC to the person in sufficient quantity to prevent additional loss of cognitive function.

36. Document ID: US 20040092012 A1

L16: Entry 36 of 235

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092012

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092012 A1

TITLE: Process for producing nerve stem cells, motor neurons, and gabaergic neurons from embryonic stem cells

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Okano, Hideyuki	Tokyo		JP	
Shimazaki, Takuya	Tokyo		JP	

US-CL-CURRENT: 435/366

ABSTRACT:

The present invention provides a method for producing motor neurons and GABAergic neurons characterized by including suspension-culturing embryonic stem cells in the presence or absence of a protein noggin to form embryoid bodies, selectively amplifying into neural stem cells from them by suspension culture in the presence of a fibroblast growth factor and a sonic hedgehog protein, and then differentiating the same. According to this method, at least motor neurons and GABAergic neurons can be systemically and efficiently produced from ES cells. Selective acquisition of neurons would be applicable to transplant therapy for amyotrophic lateral sclerosis, Huntington's chorea, Alzheimer's disease, etc.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

 37. Document ID: US 20040092010 A1

L16: Entry 37 of 235

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092010

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040092010 A1

TITLE: Method of proliferating and inducing brain stem cells to differentiate to neurons

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ruiz I Altaba, Ariel	New York	NY	US	
Alvarez-Buylla, Arturo	San Francisco	CA	US	
Lim, Daniel A.	San Francisco	CA	US	
Dahmane, Nadia	Marseille	NY	FR	
Palma, Veronica	New York		US	

US-CL-CURRENT: 435/354; 435/368

ABSTRACT:

The present invention discloses methods of producing neuronal cells from stem cells, particularly from adult brain stem cells. The use of such neuronal cells in the treatment and/or prevention of neurological diseases, conditions and/or injuries is also disclosed. In addition, the present invention provides a novel source of neuronal cells for use as a laboratory tool.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

38. Document ID: US 20040072345 A1

L16: Entry 38 of 235

File: PGPB

Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040072345
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040072345 A1

TITLE: Method and compositions for inhibiting tumorigenesis

PUBLICATION-DATE: April 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Altaba, Ariel Ruiz i.	New York	NY	US	
Sanchez, Maria Pilar	New York	NY	US	

US-CL-CURRENT: 435/368; 435/354

ABSTRACT:

The present invention discloses methods of producing neuronal cells from stem cells, particularly from adult brain stem cells. The use of such neuronal cells in the treatment and/or prevention of neurological diseases, conditions and/or injuries is also disclosed. In addition, the present invention provides a novel source of neuronal cells for use as a laboratory tool.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des](#)

39. Document ID: US 20040071665 A1

L16: Entry 39 of 235

File: PGPB

Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040071665
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040071665 A1

TITLE: Method for therapeutically treating a clinically recognized form of cardiopathology in a living mammal

PUBLICATION-DATE: April 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Xiao, Yong-Fu	Wayland	MA	US	
Morgan, James P.	Newton Centre	MA	US	

US-CL-CURRENT: 424/93.7

ABSTRACT:

The present invention provides therapeutic methods which employ one or more identifiable types of mammalian stem cells, and/or their progenitor progeny cells,

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

and/or their lineage-committed descendant cells, and/or their partially-differentiated offspring cells--with or without completely differentiated cells--to treat living mammalian subjects afflicted with a clinically recognized form of cardiopathology. The identifiable cell types include embryonic stem cells and their offspring cells; as well as the presently identified types of adult stem cells and their various offspring cells; and also include recently identified alternative cell types which have functional stem cell properties. Among the clinical forms of cardiopathology which can be efficaciously treated using the present therapeutic methods are myocardial infarction, myocarditis, heart failure, and cardiac dysrhythmia.

Full	Title	Citation	From	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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40. Document ID: US 20040058412 A1

L16: Entry 40 of 235

File: PGPB

Mar 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040058412

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040058412 A1

TITLE: Cell populations which co-express CD49c and CD90

PUBLICATION-DATE: March 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ho, Tony W.	Berwyn	PA	US	
Kopen, Gene C.	Wynnewood	PA	US	
Righter, William F.	Ridley Park	PA	US	
Rutkowski, J. Lynn	Wynnewood	PA	US	
Wagner, Joseph	West Chester	PA	US	
Herring, W. Joseph	Valley Forge	PA	US	
Ragaglia, Vanessa	Newtown Square	PA	US	

US-CL-CURRENT: 435/69.1; 424/93.7, 435/320.1, 435/325, 435/366

ABSTRACT:

Substantially homogenous cells populations which co-express CD49c, CD90 and telomerase are made. In one embodiment, humans suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition are treated with the substantially homogenous cells populations which co-express CD49c, CD90 and telomerase. In another embodiment, committed progenitor cells are made by selecting from a cultured source of a cell population which co-express CD49c and CD90 and modifying the cell population. The committed progenitor cells can be employed to treat a human suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition and to formulate pharmaceutical compositions. In a further embodiment, a substantially homogenous population of cells which co-express CD49c, CD90 and at least one cardiac-related transcription factor is made and can be used to treat a human suffering from a cardiac condition.

Full	Title	Citation	From	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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41. Document ID: US 20040038888 A1

L16: Entry 41 of 235

File: PGPB

Feb 26, 2004

PGPUB-DOCUMENT-NUMBER: 20040038888
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040038888 A1

TITLE: Functional role and potential therapeutic use of PACAP, VIP and Maxadilan in relation to adult neural stem or progenitor cells

PUBLICATION-DATE: February 26, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mercer, Alex	Bromma		SE	
Patrone, Cesare	Hagersten		SE	
Ronholm, Harriet	Trangshund		SE	
Wikstrom, Lilian	Spanga		SE	

US-CL-CURRENT: 514/12

ABSTRACT:

The invention relates generally to methods of influencing central nervous system cells to produce progeny useful in the treatment of CNS disorders. More specifically, the invention includes methods of exposing a patient suffering from such a disorder to a reagent that modulates the proliferation, migration, differentiation and survival of central nervous system cells via PACAP, Maxadilan or VIP signaling. These methods are useful for reducing at least one symptom of the disorder.

[Full](#) | [Title](#) | [Citation](#) | [From](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Desc](#)

42. Document ID: US 20040033597 A1

L16: Entry 42 of 235

File: PGPB

Feb 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040033597
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040033597 A1

TITLE: Multipotent neural stemcells from peripheral tissues and uses thereof

PUBLICATION-DATE: February 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Toronto Ontario		CA	
Akhavan, Mahnaz	Toronto Ontario		CA	
Fernandes, Karl J. L.	Toronto Ontario		CA	
Fortier, Mathieu	Orford		CA	
Miller, Freda	Toronto Ontario		CA	
Golster, Andrew	Saskatoon Saskatchewan		CA	

ABSTRACT:

This invention relates to multipotent neural stem cells, purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw Des](#)

43. Document ID: US 20040033214 A1

L16: Entry 43 of 235

File: PGPB

Feb 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040033214

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040033214 A1

TITLE: Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

PUBLICATION-DATE: February 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Young, Henry E.	Macon	GA	US	
Lucas, Paul A.	Poughkeepsie	NY	US	

US-CL-CURRENT: 424/93.7; 435/366, 435/368

ABSTRACT:

The present invention relates to pluripotent stem cells, particularly to pluripotent embryonic-like stem cells. The invention further relates to methods of purifying pluripotent embryonic-like stem cells and to compositions, cultures and clones thereof. The present invention also relates to a method of transplanting the pluripotent stem cells of the present invention in a mammalian host, such as human, comprising introducing the stem cells, into the host. The invention further relates to methods of in vivo administration of a protein or gene of interest comprising transfecting a pluripotent stem cell with a construct comprising DNA which encodes a protein of interest and then introducing the stem cell into the host where the protein or gene of interest is expressed. The present also relates to methods of producing mesodermal, endodermal or ectodermal lineage-committed cells by culturing or transplantation of the pluripotent stem cells of the present invention.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw Des](#)

44. Document ID: US 20040029269 A1

L16: Entry 44 of 235

File: PGPB

Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040029269

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040029269 A1

TITLE: Promoter-based isolation, purification, expansion, and transplantation of neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells from a population of embryonic stem cells

PUBLICATION-DATE: February 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Roy, Neeta Singh	New York	NY	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to a method of isolating neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells from a population of embryonic stem cells. This method comprises selecting a promoter which functions only in neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells and introducing a nucleic acid molecule encoding a marker protein under control of said promoter into the population of embryonic stem cells. The population of embryonic stem cells are then differentiated to produce a mixed population of cells comprising neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells. The neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells are then allowed to express the marker protein. Cells expressing the marker protein are separated from the mixed population of cells, where the separated cells are neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells. In an alternative embodiment, the embryonic stem cells are differentiated before the nucleic acid is introduced. The present invention also relates to the resulting neuronal progenitor cells, oligodendrocyte progenitor cells, or neural stem cells themselves.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

45. Document ID: US 20040014662 A1

L16: Entry 45 of 235

File: PGPB

Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040014662

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040014662 A1

TITLE: Modulation of neural stem cells and neural progenitor cells

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lindquist, Per	Staltradsven 21	SE		
Mercer, Alex	Staltradsven 15	SE		
Ronnholm, Harriet	Tornslingan 8, ltr	SE		
Wikstrom, Lilian	Stjarnfallsvagen 9	SE		

US-CL-CURRENT: 514/12

ABSTRACT:

The invention relates generally to methods of influencing central nervous system cells to produce progeny useful in the treatment of CNS disorders. More specifically, the invention includes methods of exposing a patient suffering from such a disorder to a reagent that modulates the proliferation, migration, differentiation and survival of central nervous system cells via S1P or LPA signaling. These methods are useful for reducing at least one symptom of the disorder.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

46. Document ID: US 20040014210 A1

L16: Entry 46 of 235

File: PGPB

Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040014210

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040014210 A1

TITLE: Methods for inducing differentiation of embryonic stem cells and uses thereof

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Jessell, Thomas M.	Bronx	NY	US	
Wichterle, Hynek	New York	NY	US	
Lieberam, Ivo	New York	NY	US	

US-CL-CURRENT: 435/368; 435/354, 514/12, 514/559

ABSTRACT:

The present invention provides a method for inducing differentiation of an embryonic stem cell into a differentiated neural cell. The present invention further provides a method for producing differentiated neural cells, and a population of cells comprising the differentiated neural cells. Additionally, the present invention provides a method for repopulating a spinal cord in a subject, and a method for treating nervous tissue degeneration in a subject in need of treatment. The present invention further provides neural progenitor cells, differentiated neural cells, and uses of same. Also provided is a transgenic non-human animal containing the differentiated neural cells. The present invention is further directed to a method for isolating a population of differentiated neural cells. Finally, the present invention provides a method for identifying an agent for use in treating a condition associated with neuron degeneration.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

47. Document ID: US 20040009593 A1

L16: Entry 47 of 235

File: PGPB

Jan 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040009593

PGPUB-FILING-TYPE: new

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

TITLE: Oligodendrocytes derived from human embryonic stem cells for remyelination and treatment of spinal cord injury

PUBLICATION-DATE: January 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Keirstead, Hans S.	Irvine	CA	US	
Nistor, Gabriel I.	Placentia	CA	US	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention provides populations of neural cells bearing markers of glial cells, such as oligodendrocytes and their precursors. The populations are generated by differentiating pluripotent stem cells such as human embryonic stem cells under conditions that promote enrichment of cells with the desired phenotype or functional capability. Various combinations of differentiation factors and mitogens can be used to produce cell populations that are over 95% homogeneous in morphological appearance, and the expression of oligodendrocyte markers such as GalC. The cells are capable of forming myelin sheaths, and can be used therapeutically improve function of the central nervous system.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KDDC](#) | [Draw Desc](#)

48. Document ID: US 20040005704 A1

L16: Entry 48 of 235

File: PGPB

Jan 8, 2004

PGPUB-DOCUMENT-NUMBER: 20040005704

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040005704 A1

TITLE: Low oxygen culturing of central nervous system progenitor cells

PUBLICATION-DATE: January 8, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Csete, Marie	Ann Arbor	MI	US	
Doyle, John	South Pasadena	CA	US	
Wold, Barbara J.	San Marino	CA	US	
McKay, Ron	Bethesda	MD	US	
Studer, Lorenz	New York	NY	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to the growth of cells in culture under conditions that promote cell survival, proliferation, and/or cellular differentiation. The present

inventors have found that proliferation was promoted and apoptosis reduced when cells were grown in lowered oxygen as compared to environmental oxygen conditions traditionally employed in cell culture techniques. Further, the inventors found that differentiation of precursor cells to specific fates also was enhanced in lowered oxygen where a much greater number and fraction of dopaminergic neurons were obtained when mesencephalic precursors were expanded and differentiated in lowered oxygen conditions. Thus at more physiological oxygen levels the proliferation and differentiation of CNS precursors is enhanced, and lowered oxygen is a useful adjunct for ex vivo generation of specific neuron types. Methods and compositions exploiting these findings are described.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Des](#)

49. Document ID: US 20040005661 A1

L16: Entry 49 of 235

File: PGPB

Jan 8, 2004

PGPUB-DOCUMENT-NUMBER: 20040005661

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040005661 A1

TITLE: Potential growth factors from the human tumour cell line ht 1080

PUBLICATION-DATE: January 8, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Minger, Stephen L.	London		GB	
Adams, Gregor	London		GB	
Francis, Paul	London		GB	
Mcclure, Myra	London		GB	

US-CL-CURRENT: 435/69.1; 435/226, 435/320.1, 435/366, 530/350, 536/23.2

ABSTRACT:

The invention relates to a mitogen obtainable from a human tumour cell line, such as from HT1080 cells.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Des](#)

50. Document ID: US 20030226159 A1

L16: Entry 50 of 235

File: PGPB

Dec 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030226159

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030226159 A1

TITLE: Cancer models

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bachoo, Robert M.	Roslindale	MA	US	
Depinho, Ronald A.	Brookline	MA	US	

US-CL-CURRENT: 800/18; 435/354**ABSTRACT:**

The invention provides chimeric non-human animals, methods for making and using chimeric non-human animals, isolated stem cells, and methods for identifying agents that reduces cancer in a non-human animal. For example, the invention relates to using stem cells to make chimeric non-human animals having cancer or the ability to develop cancer. Such animals can be used to evaluate tumorigenesis, tumor maintenance, and tumor regression in vivo. In addition, the chimeric non-human animals provided herein can be used to identify agents that reduce or prevent tumor formation or growth in vivo.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Draw. Des.
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 51. Document ID: US 20030224345 A1

L16: Entry 51 of 235

File: PGPB

Dec 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030224345

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030224345 A1

TITLE: Screening assays for identifying differentiation-inducing agents and production of differentiated cells for cell therapy

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
West, Michael D.	Southborough	MA	US	
Page, Raymond	Southbridge	MA	US	
Scholer, Hans	Kennett Square	PA	US	
Chapman, Karen	SouthBorough	MA	US	

US-CL-CURRENT: 435/4; 435/350, 435/351, 435/353, 435/354, 435/366**ABSTRACT:**

The invention relates to assays for screening growth factors, adhesion molecules, immunostimulatory molecules, extracellular matrix components and other materials, alone or in combination, simultaneously or temporally, for the ability to induce directed differentiation of pluripotent and multipotent stem cells.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Draw. Des.
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 52. Document ID: US 20030224074 A1

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

PGPUB-DOCUMENT-NUMBER: 20030224074
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030224074 A1

TITLE: Composition for the protection and regeneration of nerve cells containing the extract of Scutellaria Radix

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Choe, Byung-Kil	Seo-gu		KR	
Kim, Yun-Hee	Seoul		KR	
Kim, Soo-Kyung	Jung-gu		KR	
Lim, Jung-Su	Seoul		KR	
Kim, Hyo-Sup	Namdong-gu		KR	
Park, Dae-Sung	Seoul		KR	
Chang, Chi-Young	Bucheon-si		KR	

US-CL-CURRENT: 424/741

ABSTRACT:

Disclosed is a composition for protecting nerve cells, promoting nerve cell growth and regenerating nerve cells comprising a Scutellaria Radix extract. The composition has excellent protective effects against apoptosis of neuronal stem cells and differentiated nerve cells, a positive effect of inducing the regeneration of nerve cells, a regenerative effect on neurites, a neuroregenerative effect on brain nerves and peripheral nerves, a reformation effect on neuromuscular junctions, and a protective effect against apoptosis of nerve cells and a neuroregenerative effect in animals suffering from dementia and brain ischemia. Therefore, the composition can be used as a therapeutic agent for the prevention and treatment of neurodegenerative diseases, ischemic nervous diseases or nerve injuries, and for the improvement of learning capability.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) **Review** | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

53. Document ID: US 20030223972 A1

PGPUB-DOCUMENT-NUMBER: 20030223972
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030223972 A1

TITLE: Myelination of congenitally dysmyelinated forebrains using oligodendrocyte progenitor cells

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47

Goldman, Steven A.	South Salem	NY	US
Roy, Neeta Singh	New York	NY	US
Windrem, Martha	New York	NY	US

US-CL-CURRENT: 424/93.21; 435/368, 435/456, 435/458, 435/459

ABSTRACT:

One form of the present invention is directed to a method of remyelinating demyelinated axons by treating the demyelinated axons with oligodendrocyte progenitor cells under conditions which permit remyelination of the axons. Another aspect of the present invention relates to a method of treating a subject having a condition mediated by a loss of myelin or a loss of oligodendrocytes by administering to the subject oligodendrocyte progenitor cells under conditions effective to treat the condition mediated by a loss of myelin or a loss of oligodendrocytes. A further aspect of the present invention relates to an in vitro method of identifying and separating oligodendrocyte progenitor cells from a mixed population containing other mammalian brain or spinal cord cell types. This further aspect of the present invention involves removing neurons and neuronal progenitor cells from the mixed population to produce a treated mixed population. Oligodendrocyte progenitor cells are then separated from the treated mixed population to form an enriched population of oligodendrocyte progenitor cells.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KINOC](#) | [Drawn Des](#)

54. Document ID: US 20030219898 A1

L16: Entry 54 of 235

File: PGPB

Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030219898

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030219898 A1

TITLE: Novel mammalian multipotent stem cells and compositions, methods of preparation and methods of administration thereof

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sugaya, Kiminobu	Willow Springs	IL	US	
Qu, Tingyu	Chicago	IL	US	
Vaghani, Ankur V.	Chicago	IL	US	
Brannen, Christopher	Vancouver	WA	US	
Kim, Hojoong M.	Chicago	IL	US	
Pulido, Jose S.	Brookfield	WI	US	
Dong, Xiajing	Oak Park	IL	US	

US-CL-CURRENT: 435/455; 435/366

ABSTRACT:

This invention provides methods for preparing novel mammalian multipotent stem cells (MSCs), compositions thereof, and methods of preparing and administering the cells.

55. Document ID: US 20030211603 A1

L16: Entry 55 of 235

File: PGPB

Nov 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030211603

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030211603 A1

TITLE: Reprogramming cells for enhanced differentiation capacity using pluripotent stem cells

PUBLICATION-DATE: November 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Earp, David J.	Oakland	CA	US	
Carpenter, Melissa K.	Castro Valley	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Lebkowski, Jane S.	Portola Valley	CA	US	
Schiff, J. Michael	Menlo Park	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

Described in this disclosure is a new process whereby cells of one tissue type can be reprogrammed to produce cells of a different tissue type. Cells from a human donor are reprogrammed by culturing adjacent to primate pluripotent stem cells (in an undifferentiated or newly differentiated state) or in an environment supplemented by components taken from pPS cells. Simultaneously or in a subsequent step, the donor cells can be treated in a manner that enhances differentiation towards a different tissue type. In this manner, patients in need of tissue regeneration can be treated with cells differentiated and reprogrammed from their own autologous cell donation.

56. Document ID: US 20030211087 A1

L16: Entry 56 of 235

File: PGPB

Nov 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030211087

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030211087 A1

TITLE: Neutral progenitor cells from hippocampal tissue and a method for isolating and purifying them

PUBLICATION-DATE: November 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/456

ABSTRACT:

The present invention relates to an enriched or purified preparation of isolated hippocampal neural progenitor cells and progeny thereof. The present invention also relates to a method of separating neural progenitor cells from a mixed population of cell types from hippocampal tissue. This method includes selecting a promoter which functions selectively in the neural progenitor cells, introducing a nucleic acid molecule encoding a fluorescent protein under control of said promoter into all cell types of the mixed population of cell types from hippocampal tissue, allowing only the neural progenitor cells, but not other cell types, within the mixed population to express said fluorescent protein, identifying cells of the mixed population of cell types that are fluorescent, which are restricted to the neural progenitor cells, and separating the fluorescent cells from the mixed population of cell types, wherein the separated cells are restricted to the neural progenitor cells.

[Full](#) | [Title](#) | [Citation](#) | [From](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Drawn Des.](#)

57. Document ID: US 20030207450 A1

L16: Entry 57 of 235

File: PGPB

Nov 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030207450

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030207450 A1

TITLE: Isolation and transplantation of retinal stem cells

PUBLICATION-DATE: November 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Young, Michael J.	Gloucester	MA	US	
Klassen, Henry J.	Pasadena	CA	US	
Shatos, Marie A.	Athol	MA	US	
Mizumoto, Keiko	Higashi		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to the isolation, in vitro propagation, and transplantation and integration of non-pigmented retinal stem cells derived from the neuroretina of the eye, ex vivo and in vivo.

[Full](#) | [Title](#) | [Citation](#) | [From](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Drawn Des.](#)

58. Document ID: US 20030204206 A1

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

PGPUB-DOCUMENT-NUMBER: 20030204206
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030204206 A1

TITLE: Electrically responsive promoter system

PUBLICATION-DATE: October 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Padua, Rodolfo A.	Richfield	MN	US	
Schu, Carl A.	Plymouth	MN	US	
Bonner, Matthew D.	Plymouth	MN	US	
Donovan, Maura G.	St. Paul	MN	US	
Soykan, Orhan	Houghton	MI	US	

US-CL-CURRENT: 607/2

ABSTRACT:

The present invention provides methods and systems for regulating delivery of therapeutic proteins and nucleic acids. Specifically, this involves using a genetically engineered electrically responsive promoter operably linked to a therapeutic gene sequence, wherein expression of said sequence is controlled by an electrical pulse generator

[Full](#) | [Title](#) | [Citation](#) | [Pro Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Desc](#)

59. Document ID: US 20030203844 A1

PGPUB-DOCUMENT-NUMBER: 20030203844
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030203844 A1

TITLE: Treatment of central nervous system disorders

PUBLICATION-DATE: October 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Delfani, Kioumars	Sundbyberg		SE	
Janson, Ann Marie	Stockholm		SE	
Kuhn, H. Georg	Pattendorf		DE	
Plate, Karlheinz	Frankfurt		DE	
Schanzer, Anne	Frankfurt		DE	
Wachs, Frank-Peter	Obertraubling		DE	
Zhao, Ming	Solna		SE	

US-CL-CURRENT: 514/12

ABSTRACT:

The invention relates generally to methods of influencing central nervous system cells to produce progeny useful in the treatment of CNS disorders. More specifically, the invention includes methods of exposing a patient suffering from such a disorder to a reagent that modulates the proliferation, migration, differentiation and survival of central nervous system cells. These methods are useful for reducing at least one symptom of the disorder.

[Full](#) | [Title](#) | [Citation](#) | [Pro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

60. Document ID: US 20030166276 A1

L16: Entry 60 of 235

File: PGPB

Sep 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030166276

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030166276 A1

TITLE: Cultures of human CNS neural stem cells

PUBLICATION-DATE: September 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa	Foster City	CA	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The invention provides a cell culture including proliferating human neural stem cells with a doubling rate faster than thirty days. The invention also provides a cell culture media for proliferating mammalian neural cells including a standard defined culture medium, a carbohydrate source, a buffer, a source of hormones, one or more growth factors that stimulate the proliferation of neural stem cells, and LIF. The invention also provides a method for protecting, repairing or replacing damaged tissue comprising transplanting mammalian neural stem cells formed into neurospheres. The invention also provides a cell culture of differentiated human neural stem cells where the cells are glioblasts. The invention also provides a method of differentiating human neural stem cells in culture media.

[Full](#) | [Title](#) | [Citation](#) | [Pro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

61. Document ID: US 20030165485 A1

L16: Entry 61 of 235

File: PGPB

Sep 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030165485

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030165485 A1

TITLE: Functional role and potential therapeutic use of Reelin, Gas6 and Protein S in relation to adult neural stem or progenitor cells

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bertilsson, Goran	Vasterhaninge		SE	
Falk, Anna	Solna		SE	
Frisen, Jonas	Stockholm		SE	
Heidrich, Jessica	Arsta		SE	
Hellstrom, Kristina	Sodertalje		SE	
Kortesmaa, Jarkko	Stockholm		SE	
Lindquist, Per	Bromma		SE	
Lundh, Hanna	Solna		SE	
McGuire, Jacqueline	Huddinge		SE	
Mercer, Alex	Bromma		SE	
Patrone, Cesare	Hagersten		SE	
Ronnholm, Harriet	Trangsund		SE	
Wikstrom, Lilian	Spanga		SE	
Zachrisson, Olof	Spanga		SE	

US-CL-CURRENT: 424/94.6; 424/146.1

ABSTRACT:

The invention relates generally to methods of influencing central nervous system cells to produce progeny useful in the treatment of CNS disorders. More specifically, the invention includes methods of exposing a patient suffering from such a disorder to a reagent that modulates the proliferation, migration, differentiation and survival of central nervous system cells via Reelin, Gax or Protein S signaling. These methods are useful for reducing at least one symptom of the disorder.

Full	Title	Citation	From Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Drawn Des
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 62. Document ID: US 20030161818 A1

L16: Entry 62 of 235

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030161818

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030161818 A1

TITLE: Cultures, products and methods using stem cells

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Mark L.	Manhattan	KS	US	
Troyer, Deryl L.	Manhattan	KS	US	
Davis, Duane	Westmoreland	KS	US	
Mitchell, Kathy E.	Manhattan	KS	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/372, 514/44

ABSTRACT:

Stem cells from human sources can have a variety of useful applications in disease treatment and biotechnology. More particularly the umbilical cord matrix stem (UCMS) cell cultures of the invention have a variety of totipotent, pluripotent, or multipotent cells for a variety of end uses from a non-controversial, universally available, species-specific source. The technology can have application to any placental animal, including agricultural and laboratory animals and humans. The invention relates to isolating, culturing the stem cells, maintaining the stem cells, transforming the stem cells into useful cell types using genetic or other transformation technologies, stem cell and tissue banking and using untransformed or transformed cells in disease treatment.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

63. Document ID: US 20030161817 A1

L16: Entry 63 of 235

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030161817

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030161817 A1

TITLE: Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Young, Henry E.	Macon	GA	US	
Lucas, Paul A.	Poughkeepsie	NY	US	

US-CL-CURRENT: 424/93.21; 435/366

ABSTRACT:

The present invention relates to pluripotent stem cells, particularly to pluripotent embryonic-like stem cells. The invention further relates to methods of purifying pluripotent embryonic-like stem cells and to compositions, cultures and clones thereof. The present invention also relates to a method of transplanting the pluripotent stem cells of the present invention in a mammalian host, such as human, comprising introducing the stem cells, into the host. The invention further relates to methods of in vivo administration of a protein or gene of interest comprising transfecting a pluripotent stem cell with a construct comprising DNA which encodes a protein of interest and then introducing the stem cell into the host where the protein or gene of interest is expressed. The present also relates to methods of producing mesodermal, endodermal or ectodermal lineage-committed cells by culturing or transplantation of the pluripotent stem cells of the present invention.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

64. Document ID: US 20030148515 A1

L16: Entry 64 of 235

File: PGPB

Aug 7, 2003

PGPUB-DOCUMENT-NUMBER: 20030148515
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030148515 A1

TITLE: Generation of hematopoietic cells from multipotent neutral stem cells

PUBLICATION-DATE: August 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bjornson, Christopher R.	Calgary		CA	
Rietze, Rod L.	Calgary		CA	
Reynolds, Brent A.	Saltspring		CA	
Vescovi, Angelo L.	Milan		IT	

US-CL-CURRENT: 435/368; 435/372

ABSTRACT:

Multipotent neural stem cell (MNSC) progeny are induced to generate cells of the hematopoietic system by placing the MNSC progeny in a hematopoietic-inducing environment. The hematopoietic-inducing environment can be either *ex vivo* or *in vivo*. A mammal's circulatory system provides an *in vivo* environment that can induce xenogeneic, allogeneic, or autologous MNSC progeny to generate a full complement of hematopoietic cells. Transplantation of MNSC progeny provides an alternative to bone marrow and hematopoietic stem cell transplantation to treat blood-related disorders.

Full | Title | Citation | Frg | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KMC | Draw Des

65. Document ID: US 20030148513 A1

L16: Entry 65 of 235

File: PGPB

Aug 7, 2003

PGPUB-DOCUMENT-NUMBER: 20030148513
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030148513 A1

TITLE: Novel mammalian multipotent neural stem cells and compositions, methods of preparation and methods of administration thereof

PUBLICATION-DATE: August 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sugaya, Kiminobu	Willow Springs	IL	US	
Qu, Tingyu	Chicago	IL	US	
Pulido, Jose S.	Brookfield	WI	US	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to novel mammalian multipotent neural stem cells (MNSCs),

compositions thereof, and methods of preparing and administering the cells to diseased, aged or damaged tissue such that the cells properly migrate and differentiate and a neurological or corporal deficit is improved or remedied as a result.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

66. Document ID: US 20030139410 A1

L16: Entry 66 of 235

File: PGPB

Jul 24, 2003

PGPUB-DOCUMENT-NUMBER: 20030139410

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030139410 A1

TITLE: Use of modified pyrimidine compounds to promote stem cell migration and proliferation

PUBLICATION-DATE: July 24, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sugaya, Kiminobu	Willow Springs	IL	US	
Qu, Tingyu	Chicago	IL	US	

US-CL-CURRENT: 514/228.5; 514/234.2, 514/252.16

ABSTRACT:

This invention provides cells and methods for stimulating proliferation and migration of endogenous and exogenous mammalian stem cells in vivo and in vitro. The invention provides reagents and methods for efficiently proliferating mammalian stem cells in an animal in need thereof and producing stem cells that can be re-introduced into an animal in need thereof to alleviate neurological and corporal disorders.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

67. Document ID: US 20030134413 A1

L16: Entry 67 of 235

File: PGPB

Jul 17, 2003

PGPUB-DOCUMENT-NUMBER: 20030134413

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030134413 A1

TITLE: Cell production

PUBLICATION-DATE: July 17, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rathjen, Peter David	Mircham		AU	
Rathjen, Joy	Mircham		AU	

ABSTRACT:

A method of producing neurectoderm cells, which method includes providing a source of early primitive ectoderm-like (EPL) cells; a conditioned medium as hereinbefore defined; or an extract therefrom exhibiting neural inducing properties; and contacting the EPL cells with the conditioned medium, for a time sufficient to generate controlled differentiation to neurectoderm cells.

Full	Title	Citation	<input type="checkbox"/> F	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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 68. Document ID: US 20030118566 A1

L16: Entry 68 of 235

File: PGPB

Jun 26, 2003

PGPUB-DOCUMENT-NUMBER: 20030118566

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030118566 A1

TITLE: Compositions and methods for isolation, propagation, and differentiation of human stem cells and uses thereof

PUBLICATION-DATE: June 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Neuman, Toomas	Santa Monica	CA	US	
Levesque, Michel	Beverly Hills	CA	US	

US-CL-CURRENT: 424/93.21; 424/93.7, 435/368

ABSTRACT:

The invention is directed to the field of human stem cells and includes methods and compositions for isolating, propagating, and differentiating human stem cells. The invention provides therapeutic uses of the methods and compositions, including autologous transplantation of treated cells into humans for treatment of Parkinson's and other neuronal disorders.

Full	Title	Citation	<input type="checkbox"/> F	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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 69. Document ID: US 20030109039 A1

L16: Entry 69 of 235

File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109039

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030109039 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Buck, David W.	Heathfield	CA	GB	
Uchida, Nobuko	Palo Alto	CA	US	
Weissman, Irving	Redwood City		US	

US-CL-CURRENT: 435/368; 435/7.21

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

 70. Document ID: US 20030109037 A1

L16: Entry 70 of 235

File: PGPB

Jun 12, 2003

PGPUB-DOCUMENT-NUMBER: 20030109037

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030109037 A1

TITLE: Methods for application of genetically-modified endogenous or exogenous stem/progenitor or their progeny for treatment of disease

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reid, Christopher Brian	Alexandria	VA	US	
Pack, Svetlana	Gaithersburg	MD	US	

US-CL-CURRENT: 435/366

ABSTRACT:

We propose here that endogenous stem/progenitor cells of the developing or adult nervous system be genetically modified *in situ*, to express therapeutically advantageous gene products. Furthermore, we propose here that endogenous or other exogenous stem cells or their progeny be genetically modified when appropriate to express advantageous gene products (and/or modified through culture techniques), and that, if exogenously derived, they be transplanted into the ventricular system of the patient nervous system, the germinal zone of the ventricular system, into postmitotic regions of the CNS or other organs.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

 71. Document ID: US 20030109008 A1

PGPUB-DOCUMENT-NUMBER: 20030109008
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030109008 A1

TITLE: Methods of making cDNA libraries

PUBLICATION-DATE: June 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 435/91.1; 435/368

ABSTRACT:

The invention discloses methods of proliferation and differentiation of multipotent neural stem cells. Also provided are methods of making cDNA libraries and methods of screening biological agents which affect proliferation differentiation survival phenotype or function of CNS cells.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

72. Document ID: US 20030104997 A1

PGPUB-DOCUMENT-NUMBER: 20030104997
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20030104997 A1

TITLE: Multi-lineage directed induction of bone marrow stromal cell differentiation

PUBLICATION-DATE: June 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Black, Ira B.	Skillman	NY	US	
Woodbury, Dale	Piscataway	NJ	US	

US-CL-CURRENT: 514/12; 435/372, 514/44

ABSTRACT:

Methods of inducing differentiation of mammalian bone marrow stromal cells into cells of multiple embryonic lineages by contacting marrow stromal cells with precursor differentiation-inducing compounds followed by contacting the partially differentiated precursor cells with specific cell type differentiation-inducing compounds. In one embodiment, the MSC derived precursor cell cultures comprise cells,

at least some of which simultaneously express markers that are characteristic of endodermal and ectodermal cell types. In another embodiment, the differentiated cells are insulin-secreting pancreatic islet cells. Precursor differentiation-inducing compounds of the invention include anti-oxidants such as, but not limited to, beta-mercaptoethanol, dimethylsulfoxide, butylated hydroxyanisole, butylated hydroxytoluene, ascorbic acid, dimethylfumarate, and n-acetylcysteine. Endodermal cell differentiation-inducing compounds of the invention include but are not limited to anti-oxidants and growth factors including basic fibroblast growth factor. Once induced to differentiate into a particular cell type, the cells can be used for cell therapy, gene therapy, or both, for treatment of diseases, disorders, or conditions associated with tissues of multiple embryonic origins.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

73. Document ID: US 20030104619 A1

L16: Entry 73 of 235

File: PGPB

Jun 5, 2003

PGPUB-DOCUMENT-NUMBER: 20030104619

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030104619 A1

TITLE: Hypoxia-mediated neurogenesis

PUBLICATION-DATE: June 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

US-CL-CURRENT: 435/377

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

74. Document ID: US 20030103949 A1

L16: Entry 74 of 235

File: PGPB

Jun 5, 2003

PGPUB-DOCUMENT-NUMBER: 20030103949

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030103949 A1

TITLE: Screening small molecule drugs using neural cells differentiated from human embryonic stem cells

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Denham, Jerrod J.	San Francisco	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Thies, R. Scott	Pleasanton	CA	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/4

ABSTRACT:

This invention provides populations of neural progenitor cells and differentiated neurons, obtained by culturing pluripotent cells in special growth cocktails. The technology can be used to produce progenitors that proliferate through at least about 40 doublings, while maintaining the ability to differentiate into a variety of different neural phenotypes, including dopaminergic neurons. The neural progenitors and terminally differentiated neurons of this invention can be generated in large quantities for use in drug screening and the treatment of neurological disorders.

Full	Title	Citation	From Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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 75. Document ID: US 20030095956 A1

L16: Entry 75 of 235

File: PGPB

May 22, 2003

PGPUB-DOCUMENT-NUMBER: 20030095956

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030095956 A1

TITLE: Methods of proliferating undifferentiated neural cells

PUBLICATION-DATE: May 22, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 424/93.21; 435/368

ABSTRACT:

The invention discloses methods of proliferation and differentiation of multipotent neural stem cells. Also provided are methods of making cDNA libraries and methods of screening biological agents which affect proliferation differentiation survival phenotype or function of CNS cells.

Full	Title	Citation	From Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Des.
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76. Document ID: US 20030092176 A1

L16: Entry 76 of 235

File: PGPB

May 15, 2003

PGPUB-DOCUMENT-NUMBER: 20030092176

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030092176 A1

TITLE: Ependymal neural stem cells and method for their isolation

PUBLICATION-DATE: May 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Janson, Ann Marie	Stockholm	MA	SE	
Frisen, Jonas	Stockholm		SE	
Johansson, Clas	Stockholm		SE	
Momma, Stefan	Spinga		SE	
Clarke, Diana	Cambridge		US	
Zhao, Ming	Solna		SE	
Lendahl, Urban	Stockholm		SE	
Delfani, Kioumars	Solna		SE	

US-CL-CURRENT: 435/368

ABSTRACT:

The invention relates to an ependymal neural CNS stem cell, which cell expresses the surface protein Notch 1 together with at least one surface protein chosen from the group of Notch 2, Notch 3, CAR (transmembrane protein binding adenovirus) and CFTR cystic fibrosis transmembrane conductance regulator), and which cell also comprises at least one cilium. The invention also relates to preparations, including pharmaceutical preparations, comprising ependymal neural CNS stem cells, in vitro and in vivo assays based thereon and various other uses of the novel ependymal cells according to the invention.

[Full](#) | [Title](#) | [Citation](#) | [For Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn Des.](#)

77. Document ID: US 20030082802 A1

L16: Entry 77 of 235

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082802

PGPUB-FILING-TYPE: original-publication-amended

DOCUMENT-IDENTIFIER: US 20030082802 A1

TITLE: METHOD FOR NEURAL STEM CELL DIFFERENTIATION USING 5HT1A AGONISTS

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Rajan , Prithi	Rockville	Maryland	US
Altar , C. Anthony	Garrett Park	Maryland	US

US-CL-CURRENT: 435/368; 514/1

ABSTRACT:

The present invention relates to a method for differentiating a neural stem cell into a neuronal cell such as a neuroblast or a neuron *in vitro* or *in vivo*. Particularly, the invention provides for a method for neural stem cell differentiation by contacting the neural stem cell with a 5HT1A ligand or agonist.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

78. Document ID: US 20030082515 A1

L16: Entry 78 of 235

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082515

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082515 A1

TITLE: Methods of screening biological agents

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

The invention discloses methods of proliferation and differentiation of multipotent neural stem cells. Also provided are methods of making cDNA libraries and methods of screening biological agents which affect proliferation differentiation survival phenotype or function of CNS cells.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

79. Document ID: US 20030082160 A1

L16: Entry 79 of 235

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082160

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082160 A1

TITLE: Differentiation of whole bone marrow

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yu, John S.	Los Angeles	CA	US	
Kabos, Peter	Los Angeles	CA	US	
Ehtesham, Moneeb	Los Angeles	CA	US	

US-CL-CURRENT: 424/93.21; 435/368

ABSTRACT:

A method is described for generating a clinically significant volume of neural progenitor cells from whole bone marrow. A mass of bone marrow cells may be grown in a culture supplemented with fibroblast growth factor-2 (FGF-2) and epidermal growth factor (EGF). Further methods of the present invention are directed to utilizing the neural progenitor cells cultured in this fashion in the treatment of various neuropathological conditions, and in targeting delivery of cells transfected with a particular gene to diseased or damaged tissue.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

80. Document ID: US 20030082155 A1

L16: Entry 80 of 235

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082155

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082155 A1

TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Habener, Joel F.	Newton Centre	MA	US	
Zulewski, Henryk	Basel	MA	CH	
Thomas, Melissa K.	Boston	MA	US	
Abraham, Elizabeth J.	Quincy	MA	US	
Vallejo, Mario	Madrid	MA	ES	
Leech, Colin A.	Boston	MA	US	
Nolan, Anna Louise	Brookline		US	
Lechner, Andreas	Boston		US	

US-CL-CURRENT: 424/93.21; 435/366

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent

diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin and ABCG2 have been identified as molecular markers for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin and/or ABCG2-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Draw. Des.
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81. Document ID: US 20030082152 A1

L16: Entry 81 of 235

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030082152

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030082152 A1

TITLE: Adipose-derived stem cells and lattices

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hedrick, Marc H.	Encino	CA	US	
Katz, Adam J.	Charlottesville	VA	US	
Llull, Ramon	Mallorca	PA	ES	
Futrell, J. William	Pittsburgh	CA	US	
Benhaim, Prosper	Encino	CA	US	
Lorenz, Hermann Peter	Belmont	CA	US	
Zhu, Min	Los Angeles		US	

US-CL-CURRENT: 424/93.21; 435/366

ABSTRACT:

The present invention provides adipose-derived stem cells (ADSCs), adipose-derived stem cell-enriched fractions (ADSC-EF) and adipose-derived lattices, alone and combined with the ADSCs of the invention. In one aspect, the present invention provides an ADSC substantially free of adipocytes and red blood cells and clonal populations of connective tissue stem cells. The ADSCs can be employed, alone or within biologically-compatible compositions, to generate differentiated tissues and structures, both in vivo and in vitro. Additionally, the ADSCs can be expanded and cultured to produce molecules such as hormones, and to provide conditioned culture media for supporting the growth and expansion of other cell populations. In another aspect, the present invention provides a adipose-derived lattice substantially devoid of cells, which includes extracellular matrix material from adipose tissue. The lattice can be used as a substrate to facilitate the growth and differentiation of cells, whether in vivo or in vitro, into anlagen or even mature tissues or structures.

82. Document ID: US 20030059939 A1

L16: Entry 82 of 235

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030059939

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030059939 A1

TITLE: Trans-differentiation and re-differentiation of somatic cells and production of cells for cell therapies

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Page, Raymond	Southbridge	MA	US	
Dominko, Tanja	Southbridge	MA	US	
Malcuit, Christopher	Hudson	MA	US	

US-CL-CURRENT: 435/366; 435/368, 435/372

ABSTRACT:

The invention provides a method for effecting the trans-differentiation of a somatic cell, i.e., the conversion of a somatic cell of one cell type into a somatic cell of a different cell type. The method is practiced by culturing a somatic cell in the presence of at least one agent selected from the group consisting of (a) cytoskeletal inhibitors and (b) inhibitors of acetylation, and (c) inhibitors of methylation, and also culturing the cell in the presence of agents or conditions that induce differentiation to a different-cell type. The method is useful for producing histocompatible cells for cell therapy.

83. Document ID: US 20030059414 A1

L16: Entry 83 of 235

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030059414

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030059414 A1

TITLE: Cell populations which co-express CD49c and CD90

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ho, Tony W.	Berwyn	PA	US	
Kopen, Gene C.	Wynnewood	PA	US	

Righter, William F.	Ridley Park	PA	US
Rutkowski, J. Lynn	Wynnewood	PA	US
Wagner, Joseph	West Chester	PA	US

US-CL-CURRENT: 424/93.21; 435/366, 435/368

ABSTRACT:

Substantially homogenous cells populations which co-express CD49c, CD90 and telomerase are made. In one embodiment, humans suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition are treated with the substantially homogenous cells populations which co-express CD49c, CD90 and telomerase. In another embodiment, committed progenitor cells are made by selecting from a cultured source of a cell population which co-express CD49c and CD90 and modifying the cell population. The committed progenitor cells can be employed to treat a human suffering from a degenerative, traumatic, acute injury, cardiac or neurological condition and formulate pharmaceutical compositions.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Desq](#)

84. Document ID: US 20030049838 A1

L16: Entry 84 of 235

File: PGPB

Mar 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030049838

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030049838 A1

TITLE: Combined regulation of neural cell production

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Thompson, Bradley G.	Calgary		CA	
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to a method of selectively producing neural cells, including neurons or glial cells, in vitro or in vivo. Also provided are methods of treating or ameliorating neurodegenerative disease or medical conditions by producing neural cells. Thus, a combination of factors is used to achieve two steps: increasing the number of neural stem cells and instructing the neural stem cells to selectively become neurons or glial cells.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Drawn Desq](#)

85. Document ID: US 20030049837 A1

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

PGPUB-DOCUMENT-NUMBER: 20030049837

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030049837 A1

TITLE: In vitro and in vivo proliferation and use of multipotent neural stem cells and their progeny

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Alberta	RI	CA	
Reynolds, Brent	Alberta	RI	CA	
Hammang, Joseph P.	Barrington		US	
Baetge, E. Edward	Barrington		US	

US-CL-CURRENT: 435/368; 435/384

ABSTRACT:

Nucleic acids may be obtained from neural cell cultures produced by using growth factors to induce the proliferation of multipotent neural stem cells. The resultant progeny may be passaged repeatedly to produce a sufficient number of cells to obtain representative nucleic acid samples. Clonal cultures may be produced. Nucleic acids may be obtained from both cultured normal and dysfunctional neural cells and from neural cell cultures at various stages of development. This information allows for the identification of the sequence of gene expression during neural development and can be used to reveal the effects of biological agents on gene expression in neural cells. Additionally, nucleic acids derived from dysfunctional tissue can be compared with that of normal tissue to identify genetic material which may be the cause of the dysfunction. This information could then be used in the design of therapies to treat the neurological disorder. A further use of the technology would be in the diagnosis of genetic disorders or for use in identifying neural cells at a particular stage in development.

Full	Title	Citation	From Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc
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 86. Document ID: US 20030049234 A1

L16: Entry 86 of 235

File: PGPB

Mar 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030049234

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030049234 A1

TITLE: DISCOVERY, LOCALIZATION, HARVEST, AND PROPAGATION OF AN FGF2 AND BDNF- RESPONSIVE POPULATION OF NEURAL AND NEURONAL PROGENITOR CELLS IN THE ADULT HUMAN FOREBRAIN

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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GOLDMAN, STEVEN A.
NEDERGAARD, MAIKEN

SOUTH SALEM
SOUTH SALEM
NY
NY
US
US

US-CL-CURRENT: 424/93.21; 435/368

ABSTRACT:

The present invention provides neuronal progenitor cells which have been identified in histological sections of the adult human brain. The present invention also provides methods to localize, characterize, harvest, and propagate neuronal progenitor cells derived from human brain tissue. Additional methods are provided for introducing and expressing genes in the brain.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

87. Document ID: US 20030040111 A1

L16: Entry 87 of 235

File: PGPB

Feb 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030040111

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030040111 A1

TITLE: Differentiated cells suitable for human therapy

PUBLICATION-DATE: February 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gold, Joseph D.	San Francisco	CA	US	
Lebkowski, Jane S.	Portola Valley	CA	US	

US-CL-CURRENT: 435/368; 435/366, 435/370

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in depletion of undifferentiated cells, or expression of a marker that can be used to remove them later. Suitable effector sequences encode a toxin, a protein that induces apoptosis, a cell-surface antigen, or an enzyme (such as thymidine kinase) that converts a prodrug into a substance that is lethal to the cell. The differentiated cell populations produced according to this disclosure are suitable for use in tissue regeneration, and non-therapeutic applications such as drug screening.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

88. Document ID: US 20030040023 A1

L16: Entry 88 of 235

File: PGPB

Feb 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030040023
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030040023 A1

TITLE: Isolation of neural stem cells using gangliosides and other surface markers

PUBLICATION-DATE: February 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Klassen, Henry	Pasadena	CA	US	
Schwartz, Michael	Garden Grove	CA	US	
Young, Michael J.	Gloucester	MA	US	

US-CL-CURRENT: 435/7.21; 435/368

ABSTRACT:

During the growth and study of NSCs, a range of molecules present on the surface of multipotent neural stem and progenitor cells (NSCs) were identified. These markers were identified using a number of human and murine neural stem cell lines, including retinal stem cells (RSCs). The NSC-specific markers identified included gene products as well as non-protein molecules and sugar epitopes not directly coded in the genome. Together with surface markers which were determined to be absent from the surface of hNSCs, the molecules described herein provide a means to enrich for neural stem cells, or neural progenitor subpopulations, particularly using combinatorial cell sorting strategies. These same molecules also represent targets for pharmacological manipulation of NSC populations and subpopulations, both *in vivo* and *ex vivo*. Furthermore, these molecules provide potential targets for therapeutic manipulation of other neural precursor-related cell types including malignant conditions as well as other diseases originating from, or preferentially affecting, various uncommitted or replication-competent cell types.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KINDC](#) | [Draw Des](#)

89. Document ID: US 20030036522 A1

L16: Entry 89 of 235

File: PGPB

Feb 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030036522
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030036522 A1

TITLE: Identification of cells for transplantation

PUBLICATION-DATE: February 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Price, Jack	London		GB	
Uwanogho, Dafe	London		GB	

US-CL-CURRENT: 514/44; 435/6

ABSTRACT:

Pluripotent cells that are suitable for transplantation therapy, to repair neural damage, are identified, e.g. by differential display, from a gene expression profile for a selected cell, which can be compared with that obtained from a control cell.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

90. Document ID: US 20030036195 A1

L16: Entry 90 of 235

File: PGPB

Feb 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030036195

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030036195 A1

TITLE: Generation of differentiated tissue from nuclear transfer embryonic stem cells and methods of use

PUBLICATION-DATE: February 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Studer, Lorenz	New York	NY	US	
Tabar, Viviane	New York	NY	US	
Mombaerts, Peter	New York	NY	US	
Wakayama, Teruhiko	Chuou-ku		JP	
Perry, Anthony	Chuo-ku		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention provides methods of preparing mammalian cells and tissues for therapeutic and diagnostic purposes that are derived from nES cells. The present invention further provides the mammalian cells and tissues themselves. In addition, methods of using the mammalian cells and tissues as a therapeutic agent or as a diagnostic are provided.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

91. Document ID: US 20030032187 A1

L16: Entry 91 of 235

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030032187

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030032187 A1

TITLE: Selective antibody targeting of undifferentiated stem cells

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
McWhir, Jim	Midlothian	CA	GB	
Gold, Joseph D.	San Francisco	CA	US	
Schiff, J. Michael	Menlo Park		US	

US-CL-CURRENT: 435/455; 435/366

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in expression of a cell-surface antigen that can be used to deplete the undifferentiated cells. Model effector sequences encode glycosyl transferases that synthesize carbohydrate xenoantigen or alloantigen, which can be used for immunoseparation or as a target for complement-mediated lysis. The differentiated cell populations produced are suitable for use in tissue regeneration and non-therapeutic applications such as drug screening.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Drawn Des
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 92. Document ID: US 20030032181 A1

L16: Entry 92 of 235

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030032181

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030032181 A1

TITLE: Production of radial glial cells

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Gregg, Christopher	Calgary		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to a method of producing radial glial cells from neural stem cells, particularly by contacting neural stem cells with epidermal growth factor (EGF), fibroblast growth factor 2 (FGF-2) and/or TGF. α . Leukemia inhibitory factor (LIF) and ciliary neurotrophic factor (CNTF) can optionally be added to enhance the effect of EGF, FGF-1 or TGF. α . Also provided are methods of producing radial glial cells from ependymal cells, as well as methods of proliferating ependymal cells.

Full	Title	Citation	Fro	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KOMC	Drawn Des
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93. Document ID: US 20030031700 A1

L16: Entry 93 of 235

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030031700
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030031700 A1

TITLE: Device and method for treating ophthalmic diseases

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hammang, Joseph P.	Barrington	RI	US	
Baetge, E. Edward	St. Sulpice	RI	CH	
Tsiarias, William G.	Barrington	CO	US	
Spear, Peter D.	Boulder		US	

US-CL-CURRENT: 424/424; 604/890.1

ABSTRACT:

The invention provides a method for delivering biologically active molecules to the eye by implanting biocompatible capsules containing a cellular source of the biologically active molecule. Also provided is a method of treating ophthalmic diseases using biocompatible capsules.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

94. Document ID: US 20030031657 A1

L16: Entry 94 of 235

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030031657
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030031657 A1

TITLE: Stem cells and their use in transplantation

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Habener, Joel F.	Newton Centre	MA	US	
Zulewski, Henryk	Basel	MA	CH	
Abraham, Elizabeth J.	Quincy	MA	US	
Vallejo, Mario	Madrid	MA	ES	
Faustman, Denise L.	Weston		US	
Thomas, Melissa K.	Boston		US	

US-CL-CURRENT: 424/93.21; 424/93.7

<http://westbrs:9000/bin/gate.exe?f=TOC&state=62b95f.18&ref=16&dbname=PGPB,USPT,US...> 12/8/04

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

95. Document ID: US 20030022261 A1

L16: Entry 95 of 235

File: PGPB

Jan 30, 2003

PGPUB-DOCUMENT-NUMBER: 20030022261

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030022261 A1

TITLE: Co-factors for trophic factors, and methods of use, thereof

PUBLICATION-DATE: January 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gage, Fred Harrison	La Jolla	CA	US	
Taupin, Philippe J.	La Jolla	CA	US	
Ray, Jasodhara	San Diego	CA	US	

US-CL-CURRENT: 435/7.23; 514/8, 530/322

ABSTRACT:

The present invention is based on the discovery and isolation of a co-factor for trophic factors. It has been discovered that trophic factors require a co-factor to stimulate and/or potentiate the trophic factor activity and/or specificity. This was clearly identified in low density cells where trophic factors are unable, or at best, at minimal levels, able to proliferate undifferentiated cells without a co-factor. In a particular embodiment of the present invention, there is provided a composition comprising glycosylated cystatin C (CCg), an FGF co-factor that stimulates proliferation of neural and fibroblast associated undifferentiated cells. The N-glycosylation of cystatin C is required for its activity. Moreover, CCg acts in cooperation with basic fibroblast growth factor (FGF-2) to induce neural progenitor cell proliferation.

[Full](#) | [Title](#) | [Citation](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

96. Document ID: US 20030017589 A1

L16: Entry 96 of 235

File: PGPB

Jan 23, 2003

PGPUB-DOCUMENT-NUMBER: 20030017589

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030017589 A1

TITLE: Culture system for rapid expansion of human embryonic stem cells

PUBLICATION-DATE: January 23, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandalam, Ramkumar	Union City	CA	US	
Xu, Chunhui	Cupertino	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Carpenter, Melissa K.	Castro Valley	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem cells. Traditionally, pluripotent stem cells are cultured on a layer of feeder cells (such as mouse embryonic fibroblasts) to prevent them from differentiating. In the system described here, the role of feeder cells is replaced by components added to the culture environment that support rapid proliferation without differentiation. Effective features are a suitable support structure for the cells, and an effective medium that can be added fresh to the culture without being preconditioned by another cell type. Culturing human embryonic stem cells in fresh medium according to this invention causes the cells to expand surprisingly rapidly, while retaining the ability to differentiate into cells representing all three embryonic germ layers. This new culture system allows for bulk proliferation of pPS cells for commercial production of important products for use in drug screening and human therapy.

[Full](#) | [Title](#) | [Citation](#) | [From Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw. Desc.](#)

97. Document ID: US 20030013193 A1

L16: Entry 97 of 235

File: PGPB

Jan 16, 2003

PGPUB-DOCUMENT-NUMBER: 20030013193

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030013193 A1

TITLE: Method of producing region-specific neurons from human neuronal stem cells

PUBLICATION-DATE: January 16, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wu, Ping	League City	TX	US	

US-CL-CURRENT: 435/368

ABSTRACT:

A method of priming neural stem cells in vitro by adhesively culturing in a mixture of basic fibroblast growth factor, laminin and heparin to differentiate into specific neuronal phenotypes, including cholinergic, glutamatergic and GABAergic neurons, in a region-specific manner, when transplanted in vivo.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

98. Document ID: US 20030013192 A1

L16: Entry 98 of 235

File: PGPB

Jan 16, 2003

PGPUB-DOCUMENT-NUMBER: 20030013192

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030013192 A1

TITLE: Method for neural stem cell differentiation using valproate

PUBLICATION-DATE: January 16, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Laeng, Pascal	Washington	DC	US	
Mallon, Barbara	Gaithersburg	MD	US	
Pitts, Lee	Falls Church	VA	US	

US-CL-CURRENT: 435/368; 514/557

ABSTRACT:

The present invention relates to a method for differentiating a neural stem cell into a neuronal cell such as a neuroblast or neuron in vitro or in vivo. Particularly, the invention provides for a method for neural stem cell differentiation by contacting the neural stem cell with a valproate compound or analog thereof.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

99. Document ID: US 20030003574 A1

L16: Entry 99 of 235

File: PGPB

Jan 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030003574

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030003574 A1

TITLE: Multipotent stem cells from peripheral tissues and uses thereof

PUBLICATION-DATE: January 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
------	------	-------	---------	---------

Toma, Jean	Montreal	CA
Akhavan, Mahnaz	Montreal	CA
Fernandes, Karl J. L.	Montreal	CA
Fortier, Mathieu	Orford	CA
Miller, Freda	Montreal	CA

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to multipotent stem cells, purified from the peripheral tissue of mammals, and capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

100. Document ID: US 20020197238 A1

L16: Entry 100 of 235

File: PGPB

Dec 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020197238

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020197238 A1

TITLE: Platelet derived growth factor (PDGF)-derived neurospheres define a novel class of progenitor cells

PUBLICATION-DATE: December 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Chojnacki, Andrew K.	Calgary		CA	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The present invention is related to the discovery of a novel class of neural progenitor cells, which proliferate in response to platelet derived growth factor (PDGF) and differentiate into neurons and oligodendrocytes but not astrocytes. Progeny of the progenitor cells can be obtained by culturing brain tissue in PDGF without serum, epidermal growth factor (EGF), fibroblast growth factor 2, or transforming growth factor alpha. Upon subculturing into EGF-containing media, these progeny cells can proliferate and form neurospheres, whereas PDGF has no such effect.

[Full](#) | [Title](#) | [Citation](#) | [Fro](#) [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

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Terms	Documents
L15 AND neural stem cell	235

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101. Document ID: US 20020192817 A1

Using default format because multiple data bases are involved.

L16: Entry 101 of 235

File: PGPB

Dec 19, 2002

PGPUB-DOCUMENT-NUMBER: 20020192817

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020192817 A1

TITLE: Production of tyrosine hydroxylase positive neurons

PUBLICATION-DATE: December 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

US-CL-CURRENT: 435/368

[Full](#) [Title](#) [Cita](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KUMC](#) [Drawn Desc](#)

102. Document ID: US 20020182198 A1

L16: Entry 102 of 235

File: PGPB

Dec 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020182198

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020182198 A1

TITLE: Dopaminergic neuronal survival-promoting factors and uses thereof

PUBLICATION-DATE: December 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Commissiong, John W.	Mississauga		CA	
Raibekas, Andrei A.	Toronto		CA	

US-CL-CURRENT: 424/94.1; 435/183, 435/320.1, 435/368, 435/69.1, 536/23.2

ABSTRACT:

In general, the invention features substantially purified MANF and substantially purified nucleic acids encoding the same. The invention also features a pharmaceutical composition that includes MANF and a pharmaceutically-acceptable

excipient, methods for treatment of a neurodegenerative disease, methods for improving dopaminergic neuronal survival during or following cell transplantation, methods for production of neurons for transplantation, and methods for identifying compounds that modulate or mimic MANF's biological activity.

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Data](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawl Des](#)

103. Document ID: US 20020169102 A1

L16: Entry 103 of 235

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020169102

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020169102 A1

TITLE: Intranasal delivery of agents for regulating development of implanted cells in the CNS

PUBLICATION-DATE: November 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Frey, William H. II	White Bear	MN	US	

US-CL-CURRENT: 514/1; 435/368

ABSTRACT:

The present invention provides a method of regulating the development of a donor cell in the central nervous system of a mammal. The method comprises administering a composition comprising a therapeutically effective amount of at least one regulatory agent, preferably a growth factor such as bFGF, NGF, or IGF-I, or an agent that modulates the immune response to a tissue of the mammal innervated by the trigeminal nerve and/or the olfactory nerve. The methods find use in improving the clinical outcome of a mammal having undergone a neural regenerative strategy. Hence, the present invention is directed to the treatment and/or prevention of CNS disorders, such as, epilepsy, stroke, ischemia, Huntington disease, Parkinson's disease, ALS, Alzheimer's disease, brain and spinal cord injuries and demyelinating or dysmyelinating disorders, such as Pelizaeus-Merzbacher disease and multiple sclerosis.

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Data](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawl Des](#)

104. Document ID: US 20020168767 A1

L16: Entry 104 of 235

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020168767

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020168767 A1

TITLE: Method of isolating human neuroepithelial precursor cells from human fetal tissue

PUBLICATION-DATE: November 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mayer-Proschel, Margot	Pittsford	NY	US	
Rao, Mahendra S.	Salt Lake City	UT	US	
Tresco, Patrick A.	Sandy	UT	US	
Messina, Darin J.	Salt Lake City	UT	US	

US-CL-CURRENT: 435/368; 800/8

ABSTRACT:

A method for isolating human neuroepithelial precursor cells from human fetal tissue by culturing the human fetal cells in fibroblast growth factor and chick embryo extract and immunodepleting from the cultured human fetal cells any cells expressing A2B5, NG2 and eNCAM is provided. In addition, methods for transplanting these cells into an animal are provided. Animals models transplanted with these human neuroepithelial precursor cells and methods for monitoring survival, proliferation, differentiation and migration of the cells in the animal model via detection of human specific markers are also provided.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Desq](#)

105. Document ID: US 20020168766 A1

L16: Entry 105 of 235

File: PGPB

Nov 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020168766

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020168766 A1

TITLE: Genetically altered human pluripotent stem cells

PUBLICATION-DATE: November 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gold, Joseph D.	San Francisco	CA	US	
Carpenter, Melissa K.	Castro Valley	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/455

ABSTRACT:

This disclosure provides a system for obtaining genetically altered primate pluripotent stem (pPS) cells. The pPS cells are maintained in an undifferentiated state by culturing on a feeder cell line that has been immortalized and altered with drug resistance genes. Alternatively, the role of the feeder cells is replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. The cells can be genetically altered with a viral vector or DNA/lipid complex, and then selected for successful transfection by drug-resistant phenotype in the transfected cells. The system allows for bulk proliferation of

genetically altered pPS cells as important products for use in human therapy or drug screening.

Full	Title	Cita	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Draw Des
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106. Document ID: US 20020165213 A1

L16: Entry 106 of 235

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020165213

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020165213 A1

TITLE: Estrogen induced neural stem cell increase

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

US-CL-CURRENT: 514/182; 435/368, 435/6

ABSTRACT:

This invention provides a method of increasing the number of neural stem cells by using estrogen. Estrogen induces an increase in the number of neural stem cells, resulting in a larger pool of neural stem cells, which may be used in the treatment or amelioration of neurodegenerative diseases or conditions. Another aspect of the invention provides a method for identifying genes that regulate the estrogen-induced stem cell increase.

Full	Title	Cita	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Draw Des
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107. Document ID: US 20020164791 A1

L16: Entry 107 of 235

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164791

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164791 A1

TITLE: Primitive neural stem cells and method for differentiation of stem cells to neural cells

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Van Der Kooy, Derek	Toronto	MA	CA	
Tropepe, Vincent	Boston		US	

ABSTRACT:

Described are a novel cell type in the neural lineage, and method of producing the same based on the degree of neural commitment and growth factor responsiveness in vitro and the potential to give rise to neural and non-neural progeny in vivo. The novel cell type of neural lineage and cells derived therefrom have a number of applications including applications regarding tissue engineering, transplantation and gene therapy and drug discovery. Also described are suggested uses of the method and cell type including isolating genes that positively and negatively regulate the transmission from an ES cell to a neural cell and generally for studying ES cell models of mammalian neural development.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

 108. Document ID: US 20020164314 A1

L16: Entry 108 of 235

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164314

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164314 A1

TITLE: Ovarian hormone induced neural stem cell increase

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Shingo, Tetsuro	Okayama		JP	

US-CL-CURRENT: 424/93.21; 424/93.7, 435/368, 514/182

ABSTRACT:

This invention provides a method of increasing the number of neural stem cells by using ovarian hormones. Ovarian hormones induce an increase in the number of neural stem cells, resulting in a larger pool of neural stem cells, which may be used in the treatment or amelioration of neurodegenerative diseases or conditions. Another aspect of the invention provides a method for identifying genes that regulate the ovarian hormone-induced stem cell increase.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

 109. Document ID: US 20020164309 A1

L16: Entry 109 of 235

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164309

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164309 A1

TITLE: Cultures of human CNS neural stem cells

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa	Foster City	CA	US	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The invention provides a method for determining the effect of a biological agent comprising contacting a cell culture with a biological agent. The cell culture of the invention contains a culture medium containing one or more preselected growth factors effective for inducing multipotent central nervous system (CNS) neural stem cell proliferation. The cell culture also contains, suspended in the culture medium, human multipotent CNS neural stem cells that are derived from primary CNS neural tissue that have a doubling rate faster than 30 days.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

110. Document ID: US 20020164308 A1

L16: Entry 110 of 235

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164308

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164308 A1

TITLE: Embryonic stem cells and neural progenitor cells derived therefrom

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reubinoff, Benjamin Eithan	Mevaseret Zign		IL	
Pera, Martin Frederick	Prshrab Victoria		AU	
Ben-Hur, Tamir	Jerusalem		IL	

US-CL-CURRENT: 424/93.7; 435/366, 435/368

ABSTRACT:

The present invention relates to undifferentiated human embryonic stem cells, methods of cultivation and propagation and production of differentiated cells. In particular it relates to the production of human ES cells capable of yielding somatic differentiated cells in vitro, as well as committed progenitor cells such as neural progenitor cells capable of giving rise to mature somatic cells including neural cells and/or glial cells and uses thereof.

This invention provides methods that generate in vitro and in vivo models of controlled differentiation of ES cells towards the neural lineage. The model, and cells that are generated along the pathway of neural differentiation may be used for: the study of the cellular and molecular biology of human neural development,

discovery of genes, growth factors, and differentiation factors that play a role in neural differentiation and regeneration, drug discovery and the development of screening assays for teratogenic, toxic and neuroprotective effects.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Desc](#)

111. Document ID: US 20020164307 A1

L16: Entry 111 of 235

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020164307

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164307 A1

TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Habener, Joel F.	Newton Centre	MA	US	
Zulewski, Henryk	Basel	MA	CH	
Thomas, Melissa K.	Boston	MA	US	
Abraham, Elizabeth J.	Quincy	MA	US	
Vallejo, Mario	Madrid		ES	
Leech, Colin A.	Boston		US	

US-CL-CURRENT: 424/93.7; 424/93.21

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin and GLP-1 receptor have been identified as molecular markers for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby stem cells which express one or both of nestin and GLP-1R can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or isogenetically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Desc](#)

112. Document ID: US 20020160442 A1

L16: Entry 112 of 235

File: PGPB

Oct 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020160442

PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020160442 A1

TITLE: Method of characterizing potential therapeutics by determining cell-cell interactions

PUBLICATION-DATE: October 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Elias, Kathleen A.	San Francisco	CA	US	

US-CL-CURRENT: 435/40.5; 702/19

ABSTRACT:

A method quantitatively analyzes images of two different cell types that interact in producing and maintaining a disease state or other biological condition. The two separate cell types are exposed to an agent or stimulus suspected of influencing the biological condition (e.g., the agent might be a potential therapeutic for treating a cancer). The two different cell types are co-cultured or otherwise allowed to interact with one another before and during exposure to the agent. The images of the cells show how the agent affects the cells' phenotypes, including their viability, migration patterns, etc. The method generates a quantitative phenotype for each cell type by quantitatively analyzing the cell images via an automatic procedure. The quantitative phenotypes typically take the form of a group of scalar or vector descriptors that together provide a "fingerprint." The descriptors may be size values, positions, morphological values, intensity distributions, etc.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

113. Document ID: US 20020151496 A1

L16: Entry 113 of 235

File: PGPB

Oct 17, 2002

PGPUB-DOCUMENT-NUMBER: 20020151496
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020151496 A1

TITLE: Novel fibroblast growth factors

PUBLICATION-DATE: October 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bringmann, Peter W.	Concord	CA	US	
Faulds, Daryl	Mill Valley	CA	US	
Mitrovic, Branislava	Walnut Creek	CA	US	
Srinivasan, Subha	Greenbrae	CA	US	

US-CL-CURRENT: 514/12

ABSTRACT:

Novel nucleic acids, polypeptide sequences, and nucleic acid regulators thereof, have

been identified which code for a fibroblast growth factor (FGF), preferably FGF-20 or FGF-23, a class of polypeptides involved in development, differentiation, and morphogenesis, e.g., in cell-cell signalling and cell proliferation. An FGF of the present invention, fragments thereof, and derivatives thereof, have one or more of the following biological activities, e.g., promoting wound healing; promoting neuronal survival; stimulating cell proliferation, e.g., proliferation of stem cells, fibroblasts, neurons, glia, oligodendrocytes, Schwann cells, or progenitors thereof; modulating differentiation of cells; inducing embryonic development; stimulating neurite outgrowth; enhancing recovery from nerve or neuronal damage; stimulating myelination; stimulating angiogenesis; receptor binding activity; modulating tumorigenesis, etc.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

114. Document ID: US 20020151056 A1

L16: Entry 114 of 235

File: PGPB

Oct 17, 2002

PGPUB-DOCUMENT-NUMBER: 20020151056

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020151056 A1

TITLE: Novel differentiation inducing process of embryonic stem cell to ectodermal cell and its use

PUBLICATION-DATE: October 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sasai, Yoshiki	Kyoto		JP	
Nishikawa, Shin-Ichi	Kyoto		JP	

US-CL-CURRENT: 435/368

ABSTRACT:

A method for inducing differentiation of an embryonic stem cell into an ectodermal cell and an ectoderm-derived cell, which comprises culturing the embryonic stem cell under non-aggregation conditions; a medium and a medium supernatant used in the method; an agent for inducing differentiation used in the method; a stroma cell or a stroma cell-derived factor having activity of inducing differentiation in the method; an antibody which specifically recognizes the stroma cell; an antigen which recognizes the antibody; a cell induced by the method; a method for evaluating or screening a substance relating to the regulation in a differentiation step from an embryonic stem cell into an ectodermal cell or an ectoderm-derived cell by carrying out the method; and a medicament comprising the stroma cell, the stroma cell-derived cell, the antibody, the antigen or the cell.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

115. Document ID: US 20020151053 A1

L16: Entry 115 of 235

File: PGPB

Oct 17, 2002

PGPUB-DOCUMENT-NUMBER: 20020151053
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020151053 A1

TITLE: Direct differentiation of human pluripotent stem cells and characterization of differentiated cells

PUBLICATION-DATE: October 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Thies, R. Scott	Pleasanton	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

This invention provides a system for efficiently producing differentiated cells from pluripotent cells, such as human embryonic stem cells. Rather than permitting the cells to form embryoid bodies according to established techniques, differentiation is effected directly in monolayer culture on a suitable solid surface. The cells are either plated directly onto a differentiation-promoting surface, or grown initially on the solid surface in the absence of feeder cells and then exchanged into a medium that assists in the differentiation process. The solid surface and the culture medium can be chosen to direct differentiation down a particular pathway, generating a cell population that is remarkably uniform. The methodology is well adapted to bulk production of committed precursor and terminally differentiated cells for use in drug screening or regenerative medicine.

[Full](#) [Title](#) [Cita](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawn Des.](#)

116. Document ID: US 20020137204 A1

L16: Entry 116 of 235

File: PGPB

Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020137204
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020137204 A1

TITLE: Techniques for growth and differentiation of human pluripotent stem cells

PUBLICATION-DATE: September 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem (pPS) cells in the absence of feeder cells. The role of the feeder cells can be replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. Permanent cell lines are provided that can produce conditioned medium on a commercial scale. Methods have also been discovered to genetically alter pPS cells by introducing the cells with a viral vector or DNA/lipid complex. The system described in this disclosure allows for bulk proliferation of pPS cells for use in studying the biology of pPS cell differentiation, and the production of important products for use in human therapy.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

117. Document ID: US 20020136709 A1

L16: Entry 117 of 235

File: PGPB

Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020136709

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020136709 A1

TITLE: In vitro-derived adult pluripotent stem cells and uses therefor

PUBLICATION-DATE: September 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Zahner, Joseph Edward	Saint Louis	MI	US	
Sharda, Asutosh N.	Saint Louis	MO	US	

US-CL-CURRENT: 424/93.21; 435/366, 435/455

ABSTRACT:

Methods for deriving adult pluripotent stem cells from fully differentiated adult somatic cells by in vitro nuclear remodeling are provided. Cells cultured from a variety of tissue sources are treated in vitro to reverse the tissue specific epigenetic chromosomal changes associated with differentiation. Remodeled cells resemble embryonic stem cells by expressing telomerase and demonstrating pluripotency. The cells can be genetically modified to produce heterologous proteins or to correct for genetic defects. Methods for treating a human by implanting in vitro-derived adult pluripotent stem cells ("NucREM.TM. cells") and generating engineered tissues for implantation are also disclosed. Advantages to this invention include the non-use of embryos to obtain an unlimited supply of stem cells for therapy and the ability to generate autologous cells and tissues for therapeutic use.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

118. Document ID: US 20020123143 A1

L16: Entry 118 of 235

File: PGPB

Sep 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020123143
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020123143 A1

TITLE: Multipotent stem cells from peripheral tissues and uses thereof

PUBLICATION-DATE: September 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Montreal		CA	
Akhavan, Mahnaz	Montreal		CA	
Fernandes, Karl J. L.	Montreal		CA	
Fortier, Mathieu	Orford		CA	
Miller, Freda	Montreal		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

This invention relates to multipotent stem cells, purified from the peripheral tissue of mammals, and capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Draw. Des.](#)

119. Document ID: US 20020119441 A1

L16: Entry 119 of 235

File: PGPB

Aug 29, 2002

PGPUB-DOCUMENT-NUMBER: 20020119441
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020119441 A1

TITLE: Method of characterizing potential therapeutics by determining cell-cell interactions

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Elias, Kathleen A.	San Francisco	CA	US	

US-CL-CURRENT: 435/4; 382/128, 435/7.23, 702/19

ABSTRACT:

A method quantitatively analyzes images of two different cell types that interact in producing and maintaining a disease state or other biological condition. The two separate cell types are exposed to an agent or stimulus suspected of influencing the biological condition (e.g., the agent might be a potential therapeutic for treating a cancer). The two different cell types are co-cultured or otherwise allowed to interact with one another before and during exposure to the agent. The images of the cells show how the agent affects the cells' phenotypes, including their viability,

migration patterns, etc. The method generates a quantitative phenotype for each cell type by quantitatively analyzing the cell images via an automatic procedure. The quantitative phenotypes typically take the form of a group of scalar or vector descriptors that together provide a "fingerprint." The descriptors may be size values, positions, morphological values, intensity distributions, etc.

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

120. Document ID: US 20020114788 A1

L16: Entry 120 of 235

File: PGPB

Aug 22, 2002

PGPUB-DOCUMENT-NUMBER: 20020114788

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020114788 A1

TITLE: Cell implantation therapy for neurological diseases or disorders

PUBLICATION-DATE: August 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Isacson, Ole	Cambridge	MA	US	
Kim, Kwang Soo	Lexington	MA	US	

US-CL-CURRENT: 424/93.21; 435/368, 435/456

ABSTRACT:

Disclosed herein is a method for generating functional lineage-restricted progenitors from embryonic stem cells for obtaining donor cells of specific neuronal cell-fate, in sufficient quantities for the unmet cell transplantation need for treating patients with neurodegenerative diseases or disorders.

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

121. Document ID: US 20020098585 A1

L16: Entry 121 of 235

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020098585

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020098585 A1

TITLE: Hypoxia-mediated neurogenesis

PUBLICATION-DATE: July 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

122. Document ID: US 20020098584 A1

L16: Entry 122 of 235

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020098584

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020098584 A1

TITLE: Postmortem stem cells

PUBLICATION-DATE: July 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Palmer, Theo D.	San Carlos	CA	US	
Schwartz, Philip H.	Irvine	CA	US	
Taupin, Philippe	La Jolla	CA	US	
Gage, Fred H.	La Jolla	CA	US	

US-CL-CURRENT: 435/366; 435/384

ABSTRACT:

Disclosed are optimized methodologies for isolating and propagating stem cells from biopsies and postmortem tissues. Specifically disclosed are methods of culturing neural stem cells in the presence of a cocktail of trophic factors/co-factors for enhanced propagation.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

123. Document ID: US 20020098582 A1

L16: Entry 123 of 235

File: PGPB

Jul 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020098582

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020098582 A1

TITLE: Differentiated stem cells suitable for human therapy

PUBLICATION-DATE: July 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gold, Joseph D.	San Francisco	CA	US	
Lebkowski, Jane S.	Portola Valley	CA	US	

US-CL-CURRENT: 435/366; 424/93.21, 435/194

ABSTRACT:

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in depletion of undifferentiated cells, or expression of a marker that can be used to remove them later. Suitable effector sequences encode a toxin, a protein that induces apoptosis, a cell-surface antigen, or an enzyme (such as thymidine kinase) that converts a prodrug into a substance that is lethal to the cell. The differentiated cell populations produced according to this disclosure are suitable for use in tissue regeneration, and non-therapeutic applications such as drug screening.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

124. Document ID: US 20020094571 A1

L16: Entry 124 of 235

File: PGPB

Jul 18, 2002

PGPUB-DOCUMENT-NUMBER: 20020094571

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020094571 A1

TITLE: Hypoxia-mediated neurogenesis

PUBLICATION-DATE: July 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary	CA		
Sorokan, S. Todd	Victoria	CA		

US-CL-CURRENT: 435/368

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des](#)

125. Document ID: US 20020091133 A1

L16: Entry 125 of 235

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020091133

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020091133 A1

TITLE: Use of 9-substituted purine analogues and other molecules to stimulate neurogenesis

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Taylor, Eve M.	Del Mar	CA	US	

US-CL-CURRENT: 514/263.3; 514/262.1, 514/263.34, 514/263.35, 514/418

ABSTRACT:

The present invention is directed to a method of inducing neurogenesis by administering to a mammal an effective quantity of a compound that induces neurogenesis, where neurogenesis includes proliferation of neural stem and progenitor cells, differentiation of these cells into neurons, and/or survival of these new neurons. In general, the compound comprises three moieties, A, L, and B, covalently linked. A can be a purine, tetrahydroindolone, or pyrimidine; L is a linker, while B is a moiety that promotes absorption of the compound. A particularly preferred compound is N4-[{3-(6-oxo-1,6-dihydropurin-9-yl)-1-oxopropyl} amino] benzoic acid (also known as AIT-082 or leteprinim potassium). Another aspect of the invention is pharmaceutical compositions for inducing neurogenesis.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWM](#) | [Draw. Des.](#)

126. Document ID: US 20020090723 A1

L16: Entry 126 of 235

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020090723

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020090723 A1

TITLE: Techniques for growth and differentiation of human pluripotent stem cells

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/368

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem (pPS) cells in the absence of feeder cells. The role of the feeder cells can be replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. Permanent cell lines are provided that can produce conditioned medium on a commercial scale. Methods have also been discovered to genetically alter pPS cells by introducing the cells with a viral vector or DNA/lipid complex. The system described in this disclosure allows for bulk proliferation of pPS cells for use in studying the biology of pPS cell differentiation, and the production of important products for use in human therapy.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

127. Document ID: US 20020090722 A1

L16: Entry 127 of 235

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020090722

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020090722 A1

TITLE: Pluripotent mammalian cells

PUBLICATION-DATE: July 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Dominko, Tanja	Southbridge	MA	US	
Page, Raymond L.	Southbridge	MA	US	
Colman, Alan	Midlothian	VA	GB	
Vaught, Todd	Christiansburg	VA	US	
Marshall, Vivienne	Christiansburg		US	

US-CL-CURRENT: 435/366; 435/325

ABSTRACT:

The invention relates to a method of making pluripotent stem cells that does not involve the formation of early preimplantation embryos or fetal tissue. The method has general utility in the production of pluripotent stem cells from many mammalian species but has particular application in man where pluripotent stem cell production can be customized to particular human individual. The method involves the fusion of donor somatic or stem cells (or their karyoplasts) with cytoplasmic, membrane-delimited fragments of mammalian oocytes or zygotes. After the initial genomic reprogramming occurs, the cells can proliferate and thus multiply in vitro yielding a large number of autologous cells for cell therapy application. The result of this process is a cell population genomically identical to the somatic, differentiated cells derived from an individual patient. However, these cells are pluripotent in that upon application of specific growth factors, the cells are capable of differentiating into specific cell types as required by the sought clinical indication.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

128. Document ID: US 20020086005 A1

L16: Entry 128 of 235

File: PGPB

Jul 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020086005

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020086005 A1

TITLE: Tolerizing allografts of pluripotent stem cells

PUBLICATION-DATE: July 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Chiu, Choy-Pik	Cupertino	CA	US	
Kay, Robert M.	San Francisco	CA	US	

US-CL-CURRENT: 424/93.21; 424/93.7, 435/366

ABSTRACT:

This disclosure provides a system for overcoming HLA mismatch between an allograft derived from stem cells, and a patient being treated for tissue regeneration. A state of specific immune tolerance is induced in the patient, by administering a population of tolerizing cells derived from the stem cells. This allows the patient to accept an allograft of differentiated cells derived from the same source. This invention is important because it allows a single line of stem cells to act as a universal donor source for tissue regeneration in any patient, regardless of tissue type.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

129. Document ID: US 20020081724 A1

L16: Entry 129 of 235

File: PGPB

Jun 27, 2002

PGPUB-DOCUMENT-NUMBER: 20020081724

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020081724 A1

TITLE: Techniques for growth and differentiation of human pluripotent stem cells

PUBLICATION-DATE: June 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Gold, Joseph D.	San Francisco	CA	US	
Inokuma, Margaret S.	San Jose	CA	US	
Xu, Chunhui	Cupertino	CA	US	

US-CL-CURRENT: 435/366; 435/354, 435/384

ABSTRACT:

This disclosure provides an improved system for culturing human pluripotent stem (pPS) cells in the absence of feeder cells. The role of the feeder cells can be replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. Permanent cell lines are provided that can produce conditioned medium on a commercial scale. Methods have also been discovered to genetically alter pPS cells by introducing the cells with a viral vector or DNA/lipid complex. The system described in this disclosure allows for bulk proliferation of pPS cells for use in studying the biology of pPS cell differentiation, and the production of important products for use in human therapy.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

130. Document ID: US 20020068045 A1

L16: Entry 130 of 235

File: PGPB

Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020068045

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020068045 A1

TITLE: Embryonic stem cells and neural progenitor cells derived therefrom

PUBLICATION-DATE: June 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reubinoff, Benjamin Eithan	Mevaseret-Zion		IL	
Pera, Martin Frederick	Prahran		AU	
Ben-Hur, Tamir	Ramat Sharet		IL	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The present invention provides undifferentiated human embryonic stem cells, methods of cultivation and propagation and production of differentiated cells. In particular it relates to the production of human ES cells capable of yielding somatic differentiated cells in vitro, and committed progenitor cells such as neural progenitor cells capable of giving rise to mature somatic cells including neural cells and/or glial cells and uses thereof. The invention also provides methods that generate in vitro and in vivo models of controlled differentiation of ES cells towards the neural lineage. The model, and the cells that are generated along the pathway of neural differentiation may be used for the study of the cellular and molecular biology of human neural development, for the discovery of genes, growth factors, and differentiation factors that play a role in neural differentiation and regeneration, for drug discovery and for the development of screening assays for teratogenic, toxic and neuroprotective effects.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

131. Document ID: US 20020064873 A1

PGPUB-DOCUMENT-NUMBER: 20020064873
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20020064873 A1

TITLE: Stable neural stem cell lines

PUBLICATION-DATE: May 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yang, Renji	Silver Spring	MD	US	
Johe, Karl K.	Potomac	MD	US	

US-CL-CURRENT: 435/325; 435/368

ABSTRACT:

A systematic and efficient method for establishing stable neural stem cell lines and neuronal progenitor lines is described. The resulting cell lines provide robust, simple, and reproducible cultures of human and other mammalian neurons in commercially useful mass quantities while maintaining normal karyotypes and normal neuronal phenotypes.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw](#) | [Des](#)

132. Document ID: US 20020061327 A1

PGPUB-DOCUMENT-NUMBER: 20020061327
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20020061327 A1

TITLE: Device and method for treating ophthalmic diseases

PUBLICATION-DATE: May 23, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hammang, Joseph P.	Barrington	RI	US	
Baetge, E. Edward	St. Sulpice	RI	CH	
Tsiarias, William G.	Barrington	CO	US	
Spear, Peter D.	Boulder		US	

US-CL-CURRENT: 424/424; 424/130.1, 424/85.1, 424/94.1

ABSTRACT:

The invention provides a method for delivering biologically active molecules to the eye by implanting biocompatible capsules containing a cellular source of the biologically active molecule. Also provided is a method of treating ophthalmic diseases using biocompatible capsules.

133. Document ID: US 20020049178 A1

L16: Entry 133 of 235

File: PGPB

Apr 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020049178

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020049178 A1

TITLE: Method of inducing neuronal production in the brain and spinal cord

PUBLICATION-DATE: April 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Benraiss, Abdellatif	Astoria	NY	US	

US-CL-CURRENT: 514/44; 424/93.2, 435/368, 435/456

ABSTRACT:

The present invention relates to methods of inducing neuronal production in the brain, recruiting neurons to the brain, and treating a neurodegenerative condition by providing a nucleic acid construct encoding a neurotrophic factor, and injecting the nucleic acid construct intraventricularly into a subject's brain.

134. Document ID: US 20020045251 A1

L16: Entry 134 of 235

File: PGPB

Apr 18, 2002

PGPUB-DOCUMENT-NUMBER: 20020045251

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020045251 A1

TITLE: COMMON NEURAL PROGENITOR FOR THE CNS AND PNS

PUBLICATION-DATE: April 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
RAO, MAHENDRA S.	SALT LAKE CITY	UT	US	
MUJTABA, TAHMINA	SANDY	UT	US	

US-CL-CURRENT: 435/325; 435/368, 435/373, 435/377, 435/383, 435/384, 435/387,
435/391, 435/395, 435/402

ABSTRACT:

A method of generating neural crest stem cells involves inducing neuroepithelial stem cells to differentiate in vitro into neural crest stem cells. Differentiation can be induced by replating the cells on laminin, withdrawing mitogens, or adding dorsalizing agents to the growth medium. Derivatives of the peripheral nervous system can be generated by inducing the neural crest stem cells to differentiate in vitro.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

135. Document ID: US 20020039724 A1

L16: Entry 135 of 235

File: PGPB

Apr 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020039724

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020039724 A1

TITLE: Neural progenitor cell populations

PUBLICATION-DATE: April 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

This invention provides populations of neural progenitor cells, differentiated neurons, glial cells, and astrocytes. The populations are obtained by culturing stem cell populations (such as embryonic stem cells) in a cocktail of growth conditions that initiates differentiation, and establishes the neural progenitor population. The progenitors can be further differentiated in culture into a variety of different neural phenotypes, including dopaminergic neurons. The differentiated cell populations or the neural progenitors can be generated in large quantities for use in drug screening and the treatment of neurological disorders.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

136. Document ID: US 20020031792 A1

L16: Entry 136 of 235

File: PGPB

Mar 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020031792

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020031792 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: March 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Uchida, Nobuko	Palo Alto	CA	US	
Buck, David W.	Santa Clara	CA	US	
Weissman, Irving	Redwood City	CA	US	

US-CL-CURRENT: 435/7.21; 435/368

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

137. Document ID: US 20020028510 A1

L16: Entry 137 of 235

File: PGPB

Mar 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020028510

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020028510 A1

TITLE: Human cord blood as a source of neural tissue for repair of the brain and spinal cord

PUBLICATION-DATE: March 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sanberg, Paul	Spring Hill	FL	US	
Sanchez-Remos, Juan	Tampa	FL	US	
Willing, Alison	Tampa	FL	US	
Richard, Daniel D.	Sedona	AZ	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The present invention relates to the use of umbilical cord blood cells from a donor or patient to provide neural cells which may be used in transplantation. The isolated cells according to the present invention may be used to effect autologous and allogeneic transplantation and repair of neural tissue, in particular, tissue of the brain and spinal cord and to treat neurodegenerative diseases of the brain and spinal cord.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

138. Document ID: US 20020019046 A1

L16: Entry 138 of 235

File: PGPB

Feb 14, 2002

PGPUB-DOCUMENT-NUMBER: 20020019046
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020019046 A1

TITLE: Direct differentiation of human pluripotent stem cells and characterization of differentiated cells

PUBLICATION-DATE: February 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	
Funk, Walter D.	Hayward	CA	US	
Thies, R. Scott	Pleasanton	CA	US	

US-CL-CURRENT: 435/368; 435/4, 435/91.1

ABSTRACT:

This invention provides a system for efficiently producing differentiated cells from pluripotent cells, such as human embryonic stem cells. Rather than permitting the cells to form embryoid bodies according to established techniques, differentiation is effected directly in monolayer culture on a suitable solid surface. The cells are either plated directly onto a differentiation-promoting surface, or grown initially on the solid surface in the absence of feeder cells and then exchanged into a medium that assists in the differentiation process. The solid surface and the culture medium can be chosen to direct differentiation down a particular pathway, generating a cell population that is remarkably uniform. The methodology is well adapted to bulk production of committed precursor and terminally differentiated cells for use in drug screening or regenerative medicine.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

139. Document ID: US 20020016002 A1

L16: Entry 139 of 235

File: PGPB

Feb 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020016002
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020016002 A1

TITLE: Multipotent neural stem cells from peripheral tissues and uses thereof

PUBLICATION-DATE: February 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toma, Jean	Montreal	CA		
Akhavan, Mahnaz	Montreal	CA		
Fernandes, Karl J. L.	Montreal	CA		
Fortier, Mathieu	Orford	CA		
Miller, Freda	Montreal	CA		

US-CL-CURRENT: 435/368; 435/366

ABSTRACT:

This invention relates to multipotent neural stem cells, purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

140. Document ID: US 20020012995 A1

L16: Entry 140 of 235

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020012995

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020012995 A1

TITLE: Negative-sense RNA virus vector for nerve cell

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Fukumura, Masayuki	Tsukuba-shi		JP	
Asakawa, Makoto	Toyonaka-shi		JP	
Hasegawa, Mamoru	Tsukuba-shi		JP	
Shirakura, Masayuki	Tsukuba-shi		JP	

US-CL-CURRENT: 435/456; 424/93.21, 435/235.1, 435/320.1

ABSTRACT:

Use of a negative-sense RNA virus vector has enabled transfer of nucleic acid into nerve cells. The method of this invention can be used for introducing a gene efficiently into nerve cells including the central nerve tissue in gene therapy, etc.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

141. Document ID: US 20020012903 A1

L16: Entry 141 of 235

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020012903

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020012903 A1

TITLE: Method for isolating and purifying multipotential neural progenitor cells and multipotential neural progenitor cells

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

http://westbrs:9000/bin/cgi-bin/accum_query.pl

12/8/04

NAME	CITY	STATE	COUNTRY	RULE-47
Goldman, Steven A.	South Salem	NY	US	
Okano, Hideyuki	Osaka		JP	

US-CL-CURRENT: 435/4; 435/368

ABSTRACT:

The present invention relates to a method of separating multipotential neural progenitor cells from a mixed population of cell types. This method includes selecting a promoter which functions selectively in the neural progenitor cells, introducing a nucleic acid molecule encoding a fluorescent protein under control of said promoter into all cell types of the mixed population of cell types, allowing only the neural progenitor cells, but not other cell types, within the mixed population to express said fluorescent protein, identifying cells of the mixed population of cell types that are fluorescent, which are restricted to the neural progenitor cells, and separating the fluorescent cells from the mixed population of cell types, wherein the separated cells are restricted to the neural progenitor cells. The present invention also relates to an isolated human musashi promoter and an enriched or purified preparation of isolated multipotential neural progenitor cells.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Drawn Desc](#)

142. Document ID: US 20020009743 A1

L16: Entry 142 of 235

File: PGPB

Jan 24, 2002

PGPUB-DOCUMENT-NUMBER: 20020009743

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020009743 A1

TITLE: Neural progenitor cell populations

PUBLICATION-DATE: January 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Carpenter, Melissa K.	Castro Valley	CA	US	

US-CL-CURRENT: 435/6; 424/93.21, 435/368

ABSTRACT:

This invention provides populations of neural progenitor cells, differentiated neurons, glial cells, and astrocytes. The populations are obtained by culturing stem cell populations (such as embryonic stem cells) in a cocktail of growth conditions that initiates differentiation, and establishes the neural progenitor population. The progenitors can be further differentiated in culture into a variety of different neural phenotypes, including dopaminergic neurons. The differentiated cell populations or the neural progenitors can be generated in large quantities for use in drug screening and the treatment of neurological disorders.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMMC](#) | [Drawn Desc](#)

143. Document ID: US 20020004039 A1

L16: Entry 143 of 235

File: PGPB

Jan 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020004039

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020004039 A1

TITLE: Methods for treating neurological deficits

PUBLICATION-DATE: January 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reid, James Steven	Berkeley	CA	US	
Fallon, James H.	Irvine	CA	US	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

The present invention features methods and compositions for treating a patient who has a neurological deficit. The method can be carried out, for example, by contacting (in vivo or in culture) a neural progenitor cell of the patient's central nervous system (CNS) with a polypeptide that binds the epidermal growth factor (EGF) receptor and directing progeny of the proliferating progenitor cells to migrate en masse to a region of the CNS in which they will reside and function in a manner sufficient to reduce the neurological deficit. The method may include a further step in which the progeny of the neural precursor cells are contacted with a compound that stimulates differentiation.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

144. Document ID: US 20020001578 A1

L16: Entry 144 of 235

File: PGPB

Jan 3, 2002

PGPUB-DOCUMENT-NUMBER: 20020001578

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020001578 A1

TITLE: Treatment of disorders by implanting stem cells and/or progeny thereof into gastrointestinal organs

PUBLICATION-DATE: January 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Pasricha, Pankaj J.	Houston	TX	US	
Micci, Maria A.	Dickinson	TX	US	

US-CL-CURRENT: 424/93.7; 435/368

ABSTRACT:

A method of treating a disorder, typically a gastrointestinal disorder, that includes implanting stem cells and/or progeny thereof into a gastrointestinal organ of a subject. Also, a method of producing enhanced levels of insulin that includes implanting stem cells and/or progeny thereof into the pancreas of a subject.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

145. Document ID: US 20010055808 A1

L16: Entry 145 of 235

File: PGPB

Dec 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010055808

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010055808 A1

TITLE: Use of collagenase in the preparation of neural stem cell cultures

PUBLICATION-DATE: December 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Uchida, Nobuko	Palo Alto	CA	US	

US-CL-CURRENT: 435/368

ABSTRACT:

The invention provides a method for using collagenase to dissociate neural stem cells in neural stem cell cultures. The collagenase treatment results in an increased cell viability and an increased number of proliferated neural stem cells over time.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

146. Document ID: US 20010055587 A1

L16: Entry 146 of 235

File: PGPB

Dec 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010055587

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010055587 A1

TITLE: TRANSPLANTATION OF NEURAL CELLS FOR THE TREATMENT OF CHRONIC PAIN OR SPASTICITY

PUBLICATION-DATE: December 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
DINSMORE, JONATHAN	BROOKLINE	MA	US	
SIEGAN, JULIE	BOSTON	MA	US	

ABSTRACT:

Methods for using neural cells to treat chronic pain and/or spasticity are described. The neural cells can be derived from any mammal, and are preferably human or porcine in origin. The neural cells preferably are serotonergic cells or are gamma-aminobutyric acid (GABA)-producing cells. Neural cells can be obtained from adult, juvenile, embryonic or fetal donors. Neural cells can be modified to be suitable for transplantation into a subject. For example, the neural cells can be modified such that an antigen (e.g., an MHC class I antigen) on the cell surface which is capable of stimulating an immune response against the cell in a subject is altered (e.g., by contact with an anti-MHC class I antibody, or a fragment or derivative thereof) to inhibit rejection of the cell when introduced into the subject or can be genetically modified to produce a factor. In one embodiment, the neural cells are obtained from a pig which is essentially free from organisms or substances which are capable of transmitting infection or disease to the recipient subject. The neural cells of the present invention can be used to treat chronic pain and/or spasticity by delivering the cells into the spinal cord of a subject.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

147. Document ID: US 20010046489 A1

L16: Entry 147 of 235

File: PGPB

Nov 29, 2001

PGPUB-DOCUMENT-NUMBER: 20010046489

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010046489 A1

TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus

PUBLICATION-DATE: November 29, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Habener, Joel E.	Newton Center	MA	US	
Zulewski, Henryk	Geneva	MA	CH	
Abraham, Elizabeth J.	Quincy	MA	US	
Thomas, Melissa K.	Boston		US	
Vallejo, Mario	Madrid		ES	

US-CL-CURRENT: 424/93.21; 424/152.1, 435/366, 514/9

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described

whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

Full	Title	Cita	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Desc
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148. Document ID: US 20010044122 A1

L16: Entry 148 of 235

File: PGPB

Nov 22, 2001

PGPUB-DOCUMENT-NUMBER: 20010044122

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010044122 A1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Buck, David W.	Heathfield	CA	GB	
Uchida, Nobuko	Palo Alto	CA	US	
Weissman, Irving	Redwood City		US	

US-CL-CURRENT: 435/7.21; 435/368

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

Full	Title	Cita	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMPC	Drawn Desc
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149. Document ID: US 20010043923 A1

L16: Entry 149 of 235

File: PGPB

Nov 22, 2001

PGPUB-DOCUMENT-NUMBER: 20010043923

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010043923 A1

TITLE: Mx-1 conditionally immortalized cells

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Schinistine, Malcolm	Ben Salem	PA	US	
Shoichet, Molly S.	Toronto	RI	CA	
Gentile, Frank T.	Warwick	RI	US	

Hammang, Joseph P.	Barrington	PA	US
Holland, Laura M.	Horsham	MA	US
Cain, Brian M.	Everett	MA	US
Doherty, Edward J.	Mansfield	RI	US
Winn, Shelley R.	Smithfield		US
Aebischer, Patrick	Lutry		CH

US-CL-CURRENT: 424/93.21

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

150. Document ID: US 20010039049 A1

L16: Entry 150 of 235

File: PGPB

Nov 8, 2001

PGPUB-DOCUMENT-NUMBER: 20010039049

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010039049 A1

TITLE: Erythropoietin-mediated neurogenesis

PUBLICATION-DATE: November 8, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Weiss, Samuel	Calgary		CA	
Sorokan, S. Todd	Victoria		CA	

US-CL-CURRENT: 435/368

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

151. Document ID: US 20010034061 A1

L16: Entry 151 of 235

File: PGPB

Oct 25, 2001

PGPUB-DOCUMENT-NUMBER: 20010034061

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010034061 A1

TITLE: Methods for isolation and activation of, and control of differentiation from, stem and progenitor cells

PUBLICATION-DATE: October 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Csete, Marie	South Pasadena	CA	US	
Doyle, John	South Pasadena	CA	US	
Wold, Barbara	San Marino	CA	US	

US-CL-CURRENT: 435/377; 435/4, 435/455

ABSTRACT:

The present invention provides a method of isolating, maintaining, and/or enriching for stem or progenitor cells derived from diverse organ or tissue sources. The invention specifically teaches that these can be accomplished by the controlled use of subatmospheric oxygen culture, and that the precise oxygen level or levels must be determined empirically and/or by reference to physiologic levels within intact functioning organ or tissue.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn Des](#)

152. Document ID: US 20010024824 A1

L16: Entry 152 of 235

File: PGPB

Sep 27, 2001

PGPUB-DOCUMENT-NUMBER: 20010024824

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010024824 A1

TITLE: Stem cells and their use in transplantation

PUBLICATION-DATE: September 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Moss, Peter Ian	London		GB	
Walters, David Martin	London		GB	
Pointer, Graham	London		GB	

US-CL-CURRENT: 435/366; 424/93.7

ABSTRACT:

Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw Des](#)

153. Document ID: US 20010007657 A1

L16: Entry 153 of 235

File: PGPB

Jul 12, 2001

PGPUB-DOCUMENT-NUMBER: 20010007657
PGPUB-FILING-TYPE: new-utility
DOCUMENT-IDENTIFIER: US 20010007657 A1

TITLE: Compositions and methods for manipulating glial progenitor cells and treating neurological deficits

PUBLICATION-DATE: July 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Reid, James Steven	Berkeley	CA	US	
Fallon, James H.	Irvine	CA	US	

US-CL-CURRENT: 424/93.7

ABSTRACT:

The invention provides compositions and methods for attracting glial and neuronal progenitor cells and their progeny to desired sites within the central nervous system tissue. These compositions and methods can also be used to induce directed differentiation of these cells. By providing various ways to generate new glial and neuronal cells from endogenous progenitor cells, the invention also provides methods for inducing regeneration of tissues and neurological function, and, indeed, generating new phenotypes and capabilities. Thus, the invention features methods and compositions for ameliorating neurological deficits, including inherited disorders, trauma, infections and the like.

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KIMC](#) | [Draw Des](#)

154. Document ID: US 6812027 B2

L16: Entry 154 of 235

File: USPT

Nov 2, 2004

US-PAT-NO: 6812027

DOCUMENT-IDENTIFIER: US 6812027 B2

TITLE: Discovery, localization, harvest, and propagation of an FGF2 and BDNF-responsive population of neural and neuronal progenitor cells in the adult human forebrain

DATE-ISSUED: November 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldman; Steven A.	South Salem	NY		
Nedergaard; Maiken	South Salem	NY		

US-CL-CURRENT: 435/377; 435/325, 435/366, 435/368, 435/383, 435/384, 435/455, 436/513

ABSTRACT:

The present invention provides neuronal progenitor cells which have been identified in histological sections of the adult human brain. The present invention also provides methods to localize, characterize, harvest, and propagate neuronal progenitor cells derived from human brain tissue. Additional methods are provided for introducing and expressing genes in the brain.

25 Claims, 32 Drawing figures

Exemplary Claim Number: 4

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

155. Document ID: US 6808702 B2

L16: Entry 155 of 235

File: USPT

Oct 26, 2004

US-PAT-NO: 6808702

DOCUMENT-IDENTIFIER: US 6808702 B2

TITLE: Treatment of disorders by implanting stem cells and/or progeny thereof into gastrointestinal organs

DATE-ISSUED: October 26, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pasricha; Pankaj J.	Houston	TX		
Micci; Maria A.	Dickinson	TX		

US-CL-CURRENT: 424/93.1; 424/93.2, 424/93.21

ABSTRACT:

A method of treating a disorder, typically a gastrointestinal disorder, that includes implanting stem cells and/or progeny thereof into a gastrointestinal organ of a subject. Also, a method of producing enhanced levels of insulin that includes implanting stem cells and/or progeny thereof into the pancreas of a subject.

17 Claims, 15 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full	Title	Cita	Front	Review	Classification	Date	Reference	Claims	KMNC	Draw. Desc.
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156. Document ID: US 6787356 B1

L16: Entry 156 of 235

File: USPT

Sep 7, 2004

US-PAT-NO: 6787356

DOCUMENT-IDENTIFIER: US 6787356 B1

TITLE: Cell expansion system for use in neural transplantation

DATE-ISSUED: September 7, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Studer; Lorenz	New York	NY		
McKay; Ron D.	Bethesda	MD		

US-CL-CURRENT: 435/377; 424/93.21, 435/325, 435/384, 514/44

ABSTRACT:

The invention provides a method of culturing cells which includes a proliferating step in which the number of precursor cells is expanded and a differentiating step in which the expanded precursor cells develop into neuronal cells. The proliferating step includes the step of incubating the precursor cells in proliferating medium which includes basic fibroblast growth factor (bFGF). The differentiating step includes incubating the precursor cells in differentiation media in a manner effective to form a cellular aggregate that is not adhered to any surface of the incubation vessel. In a preferred embodiment, the cells are incubated in a roller tube. The differentiation media can also include at least one differentiating agent. The invention also provides a method for treating a neurological disorder, such as Parkinson's disease, a method of introducing a gene product into a brain of a patient, an assay for neurologically active substances, and a cell culture.

23 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

Full	Title	Cita	Front	Review	Classification	Date	Reference	Claims	KMNC	Draw. Desc.
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157. Document ID: US 6787355 B1

L16: Entry 157 of 235

File: USPT

Sep 7, 2004

US-PAT-NO: 6787355

DOCUMENT-IDENTIFIER: US 6787355 B1

TITLE: Multipotent neural stem cells from peripheral tissues and uses thereof

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miller; Freda D.	Montreal			CA
Gloster; Andrew	Saskatoon			CA
Toma; Jean	Montreal			CA

US-CL-CURRENT: 435/377; 435/325, 435/375, 435/378, 435/383

ABSTRACT:

This invention relates to multipotent neural stem cells, purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues.

8 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Cita	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw Desc
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 158. Document ID: US 6777233 B2

L16: Entry 158 of 235

File: USPT

Aug 17, 2004

US-PAT-NO: 6777233

DOCUMENT-IDENTIFIER: US 6777233 B2

TITLE: Cultures of human CNS Neural stem cells

DATE-ISSUED: August 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Foster City	CA		

US-CL-CURRENT: 435/368; 435/377

ABSTRACT:

The invention provides a method for determining the effect of a biological agent comprising contacting a cell culture with a biological agent. The cell culture of the invention contains a culture medium containing one or more preselected growth factors effective for inducing multipotent central nervous system (CNS) neural stem cell proliferation. The cell culture also contains, suspended in the culture medium, human multipotent CNS neural stem cells that are derived from primary CNS neural tissue that have a doubling rate faster than 30 days.

2 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Cita	Front	Review	Classification	Date	Reference	Abstract	Claims	KWMC	Draw Desc
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159. Document ID: US 6767738 B1

L16: Entry 159 of 235

File: USPT

Jul 27, 2004

US-PAT-NO: 6767738

DOCUMENT-IDENTIFIER: US 6767738 B1

TITLE: Method of isolating adult mammalian CNS-derived progenitor stem cells using density gradient centrifugation

DATE-ISSUED: July 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gage; Fred H.	La Jolla	CA		
Palmer; Theo	San Carlos	CA		
Safar; Francis G.	Irvine	CA		
Takahashi; Jun	Kyoto			JP
Takahashi; Masayo	Kyoto			JP

US-CL-CURRENT: 435/325; 435/366, 435/368, 435/378

ABSTRACT:

The present invention is directed to methods of repairing damaged or diseased, specialized or differentiated tissue in mature animals, particularly neuronal tissue such as retinas. In particular, the invention relates to transplantation of adult, hippocampus-derived progenitor cells into a selected neural tissue site of a recipient. These cells can functionally integrate into mature and immature neural tissue. The invention encompasses, in one aspect, repopulating a retina of a dystrophic animal with neurons, by injecting clonally derived, adult central nervous system derived stem cells (ACSC) derived from a healthy donor animal into an eye of the dystrophic recipient. Herein disclosed is the first successful and stable integration of clonally derived ACSC into same-species but different strain recipients (e. g., Fischer rat-derived adult hippocampal derived progenitor cells (AHPCs) into dystrophic RCS rats). Surprisingly, AHPCs were also found to integrate successfully into a xenogeneic recipient (e.g., rat AHPCs into the retina of dystropic rd-I mice).

13 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KWMC](#) | [Draw Des](#)

160. Document ID: US 6749850 B1

L16: Entry 160 of 235

File: USPT

Jun 15, 2004

US-PAT-NO: 6749850

DOCUMENT-IDENTIFIER: US 6749850 B1

TITLE: Methods, compositions and kits for promoting recovery from damage to the central nervous system

DATE-ISSUED: June 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Finkelstein; Seth P.	Needham	MA		
Snyder; Evan Y.	Jamaica Plain	MA		

US-CL-CURRENT: 424/93.7; 424/93.1, 514/12

ABSTRACT:

The present application relates to methods, kits and compositions for improving a subject's recovery from CNS injury. In certain aspects, methods of the invention comprise administering to a subject cells and a neural stimulant. Recovery may be manifest by improvements in sensorimotor or cognitive abilities, e.g., improved limb movement and control or improved speech capability. In certain embodiments, subject methods can be used as part of a treatment for damage resulting from ischemia, hypoxia or trauma.

7 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Cited By](#) | [Assignee](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

161. Document ID: US 6680198 B1

L16: Entry 161 of 235

File: USPT

Jan 20, 2004

US-PAT-NO: 6680198

DOCUMENT-IDENTIFIER: US 6680198 B1

TITLE: Engraftable human neural stem cells

DATE-ISSUED: January 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 424/93.7

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to

transplantation, human NSCs are capable of expressing foreign transgenes *in vivo* in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia *in vitro* as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

2 Claims, 53 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

162. Document ID: US 6673606 B1

L16: Entry 162 of 235

File: USPT

Jan 6, 2004

US-PAT-NO: 6673606

DOCUMENT-IDENTIFIER: US 6673606 B1

TITLE: Therapeutic uses for mesenchymal stromal cells

DATE-ISSUED: January 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tennekoon; Gihan	Wynnewood	PA		
Coyle; Andrew J.	Philadelphia	PA		
Grinspan; Judith	Ardmore	PA		
Beesley; Jackie S.	West Sussex			GB

US-CL-CURRENT: 435/372; 424/93.1, 435/325, 435/366, 435/368, 435/377

ABSTRACT:

Human mesenchymal stromal cells can be induced to differentiate into oligodendrocytes and neurons, respectively. For these cell types, therefore, MSCs can be a therapeutic source, either *in vitro* or *in vivo*, in the context of treating pathologies of the central nervous system which are characterized by neuron loss, such as Parkinson's disease, Alzheimer's disease and stroke, as well as head trauma, or by dysfunction in ganglioside storage or demyelination, such as Tay-Sachs disease, G1 gangliosidosis, metachromatic leukodystrophy, and multiple sclerosis.

4 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

163. Document ID: US 6649184 B2

L16: Entry 163 of 235

File: USPT

Nov 18, 2003

US-PAT-NO: 6649184

DOCUMENT-IDENTIFIER: US 6649184 B2

TITLE: Device and method for treating ophthalmic diseases

DATE-ISSUED: November 18, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	St. Sulpice			CH
Tsiarias; William G.	Barrington	RI		
Spear; Peter D.	Boulder	CO		

US-CL-CURRENT: 424/427; 623/4.1

ABSTRACT:

The invention provides a method for delivering biologically active molecules to the eye by implanting biocompatible capsules containing a cellular source of the biologically active molecule. Also provided is a method of treating ophthalmic diseases using biocompatible capsules.

3 Claims, 6 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Description](#) | [Claims](#) | [KWMC](#) | [Draw. Des.](#)

164. Document ID: US 6638763 B1

L16: Entry 164 of 235

File: USPT

Oct 28, 2003

US-PAT-NO: 6638763

DOCUMENT-IDENTIFIER: US 6638763 B1

**** See image for Certificate of Correction ****

TITLE: Isolated mammalian neural stem cells, methods of making such cells

DATE-ISSUED: October 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steindler; Dennis A.	Memphis	TN		
Laywell; Eric D.	Memphis	TN		
Kukekou; Valery G.	Memphis	TN		
Thomas; L. Brannon	Johnson City	TN		

ABSTRACT:

Using a novel culture approach, previously unknown populations of neural progenitor cells have been found within an adult mammalian brain. By limiting cell-cell contact, dissociated adult brain yields at least two types of cell aggregates. These aggregates or clones of stem/precursor cells can be generated from adult brain tissue with significantly long postmortem intervals. Both neurons and glia arise from stem/precursor cells of these cultures, and the cells can survive transplantation to the adult mammalian brain.

1 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

Full	Title	Cita	Front	Review	Classification	Date	Reference	Claims	KOMC	Draw. Desc.
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 165. Document ID: US 6610540 B1

L16: Entry 165 of 235

File: USPT

Aug 26, 2003

US-PAT-NO: 6610540

DOCUMENT-IDENTIFIER: US 6610540 B1

TITLE: Low oxygen culturing of central nervous system progenitor cells

DATE-ISSUED: August 26, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csete; Marie	Ann Arbor	MI		
Doyle; John	South Pasadena	CA		
Wold; Barbara J.	San Marino	CA		
McKay; Ron	Bethesda	MD		
Studer; Lorenz	New York	NY		

US-CL-CURRENT: 435/375; 435/325, 435/352, 435/368, 435/377, 435/4

ABSTRACT:

The present invention relates to the growth of cells in culture under conditions that promote cell survival, proliferation, and/or cellular differentiation. The present inventors have found that proliferation was promoted and apoptosis reduced when cells were grown in lowered oxygen as compared to environmental oxygen conditions traditionally employed in cell culture techniques. Further, the inventors found that differentiation of precursor cells to specific fates also was enhanced in lowered oxygen where a much greater number and fraction of dopaminergic neurons were obtained when mesencephalic precursors were expanded and differentiated in lowered oxygen conditions. Thus at more physiological oxygen levels the proliferation and differentiation of CNS precursors is enhanced, and lowered oxygen is a useful adjunct for ex vivo generation of specific neuron types. Methods and compositions exploiting these findings are described.

11 Claims, 22 Drawing figures

Exemplary Claim Number: 1

166. Document ID: US 6599694 B2

L16: Entry 166 of 235

File: USPT

Jul 29, 2003

US-PAT-NO: 6599694

DOCUMENT-IDENTIFIER: US 6599694 B2

TITLE: Method of characterizing potential therapeutics by determining cell-cell interactions

DATE-ISSUED: July 29, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Elias; Kathleen A.	San Francisco	CA		

US-CL-CURRENT: 435/4; 435/40.51, 435/7.23

ABSTRACT:

A method quantitatively analyzes images of two different cell types that interact in producing and maintaining a disease state or other biological condition. The two separate cell types are exposed to an agent or stimulus suspected of influencing the biological condition (e.g., the agent might be a potential therapeutic for treating a cancer). The two different cell types are co-cultured or otherwise allowed to interact with one another before and during exposure to the agent. The images of the cells show how the agent affects the cells' phenotypes, including their viability, migration patterns, etc. The method generates a quantitative phenotype for each cell type by quantitatively analyzing the cell images via an automatic procedure. The quantitative phenotypes typically take the form of a group of scalar or vector descriptors that together provide a "fingerprint." The descriptors may be size values, positions, morphological values, intensity distributions, etc.

15 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

167. Document ID: US 6589728 B2

L16: Entry 167 of 235

File: USPT

Jul 8, 2003

US-PAT-NO: 6589728

DOCUMENT-IDENTIFIER: US 6589728 B2

TITLE: Methods for isolation and activation of, and control of differentiation from, stem and progenitor cells

DATE-ISSUED: July 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csete; Marie	South Pasadena	CA		
Doyle; John	South Pasadena	CA		
Wold; Barbara	San Marino	CA		

US-CL-CURRENT: 435/4; 435/375, 435/377**ABSTRACT:**

The present invention provides a method of isolating, maintaining, and/or enriching for stem or progenitor cells derived from diverse organ or tissue sources. The invention specifically teaches that these can be accomplished by the controlled use of subatmospheric oxygen culture, and that the precise oxygen level or levels must be determined empirically and/or by reference to physiologic levels within intact functioning organ or tissue.

28 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Cita	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Des
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 168. Document ID: US 6576464 B2

L16: Entry 168 of 235

File: USPT

Jun 10, 2003

US-PAT-NO: 6576464

DOCUMENT-IDENTIFIER: US 6576464 B2

TITLE: Methods for providing differentiated stem cells

DATE-ISSUED: June 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gold; Joseph D.	San Francisco	CA		
Lebkowski; Jane S.	Portola Valley	CA		

US-CL-CURRENT: 435/325; 536/23.1, 536/23.4, 536/24.1, 536/25.5**ABSTRACT:**

This invention provides a system for producing differentiated cells from a stem cell population for use wherever a relatively homogenous cell population is desirable. The cells contain an effector gene under control of a transcriptional control element (such as the TERT promoter) that causes the gene to be expressed in relatively undifferentiated cells in the population. Expression of the effector gene results in depletion of undifferentiated cells, or expression of a marker that can be used to remove them later. Suitable effector sequences encode a toxin, a protein that induces apoptosis, a cell-surface antigen, or an enzyme (such as thymidine kinase) that converts a prodrug into a substance that is lethal to the cell. The differentiated cell populations produced according to this disclosure are suitable for use in tissue regeneration, and non-therapeutic applications such as drug screening.

30 Claims, 10 Drawing figures

Exemplary Claim Number: 1

169. Document ID: US 6541255 B1

L16: Entry 169 of 235

File: USPT

Apr 1, 2003

US-PAT-NO: 6541255

DOCUMENT-IDENTIFIER: US 6541255 B1

TITLE: Engraftable human neural stem cells

DATE-ISSUED: April 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 514/44

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene vmyc)--that are comparably safe (vmyc is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

4 Claims, 53 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

170. Document ID: US 6528306 B1

L16: Entry 170 of 235

File: USPT

Mar 4, 2003

US-PAT-NO: 6528306

DOCUMENT-IDENTIFIER: US 6528306 B1

TITLE: Engraftable human neural stem cells

DATE-ISSUED: March 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 435/455

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

3 Claims, 53 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

171. Document ID: US 6498018 B1

L16: Entry 171 of 235

File: USPT

Dec 24, 2002

US-PAT-NO: 6498018
DOCUMENT-IDENTIFIER: US 6498018 B1

TITLE: Cultures of human CNS neural stem cells

DATE-ISSUED: December 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Foster City	CA		

US-CL-CURRENT: 435/29; 435/368

ABSTRACT:

The invention provides a method for determining the effect of a biological agent comprising contacting a cell culture with a biological agent. The cell culture of the invention contains a culture medium containing one or more preselected growth factors effective for inducing multipotent central nervous system (CNS) neural stem cell proliferation. The cell culture also contains, suspended in the culture medium, human multipotent CNS neural stem cells that are derived from primary CNS neural tissue that have a doubling rate faster than 30 days.

4 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Print](#) | [Claims](#) | [KIMC](#) | [Drawn Desc](#)

172. Document ID: US 6497872 B1

L16: Entry 172 of 235

File: USPT

Dec 24, 2002

US-PAT-NO: 6497872

DOCUMENT-IDENTIFIER: US 6497872 B1

TITLE: Neural transplantation using proliferated multipotent neural stem cells and their progeny

DATE-ISSUED: December 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 424/93.1; 424/93.2, 424/93.21

ABSTRACT:

The invention provides methods of transplanting multipotent neural stem cell progeny to a host by obtaining a population of cells derived from mammalian neural tissue containing at least one multipotent CNS multipotent neural stem cell; culturing the

neural stem cell in a culture medium containing one or more growth factors which induce multipotent neural stem cell proliferation; inducing proliferation of the multipotent neural stem cell to produce neural stem cell progeny which includes multipotent neural stem cell progeny cells; and transplanting the multipotent neural stem cell progeny to the host. Also provided are methods of transplanting neural stem cell progeny to a host by obtaining an in vitro cell culture containing CNS neural stem cells where one or more cells in the culture (i) proliferates in a culture medium supplemented with one or more mitogens, (ii) retains the capacity for renewed proliferation, and (iii) maintains the multipotential capacity, under suitable culture conditions, to differentiate into neurons, astrocytes, and oligodendrocytes; and transplanting the one or more cells to the host.

32 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

173. Document ID: US 6495364 B2

L16: Entry 173 of 235

File: USPT

Dec 17, 2002

US-PAT-NO: 6495364

DOCUMENT-IDENTIFIER: US 6495364 B2

TITLE: Mx-1 conditionally immortalized cells

DATE-ISSUED: December 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Messing; Albee	Madison	WI		

US-CL-CURRENT: 435/320.1; 424/93.2, 435/325, 435/455, 514/44

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

2 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

174. Document ID: US 6468794 B1

L16: Entry 174 of 235

File: USPT

Oct 22, 2002

US-PAT-NO: 6468794

DOCUMENT-IDENTIFIER: US 6468794 B1

TITLE: Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Uchida; Nobuko	Palo Alto	CA		
Buck; David W.	Santa Clara	CA		
Weissman; Irving	Redwood City	CA		

US-CL-CURRENT: 435/368; 435/343

ABSTRACT:

Enriched neural stem and progenitor cell populations, and methods for identifying, isolating and enriching for neural stem cells using reagent that bind to cell surface markers, are provided.

13 Claims, 13 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Document](#) | [Accumulation](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

175. Document ID: US 6465215 B1

L16: Entry 175 of 235

File: USPT

Oct 15, 2002

US-PAT-NO: 6465215

DOCUMENT-IDENTIFIER: US 6465215 B1

TITLE: Identification of cells for transplantation

DATE-ISSUED: October 15, 2002

0224*

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Price; Jack	London			GB
Uwanogho; Dave	London			GB

US-CL-CURRENT: 435/69.1; 435/6, 435/91.2

ABSTRACT:

Pluripotent cells that are suitable for transplantation therapy, to repair neural damage, are identified, e.g. by differential display, from a gene expression profile

for a selected cell, which can be compared with that obtained from a control cell.

17 Claims, 0 Drawing figures
Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

176. Document ID: US 6444205 B2

L16: Entry 176 of 235

File: USPT

Sep 3, 2002

US-PAT-NO: 6444205

DOCUMENT-IDENTIFIER: US 6444205 B2

**** See image for Certificate of Correction ****

TITLE: Transplantation of neural cells for the treatment of chronic pain or spasticity

DATE-ISSUED: September 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dinsmore; Jonathan	Brookline	MA		
Siegan; Julie	Boston	MA		

US-CL-CURRENT: 424/93.7

ABSTRACT:

Methods for using neural cells to treat chronic pain and/or spasticity are described. The neural cells can be derived from any mammal, and are preferably human or porcine in origin. The neural cells preferably are serotonergic cells or are gamma-aminobutyric acid (GABA)--producing cells. Neural cells can be obtained from adult, juvenile, embryonic or fetal donors. Neural cells can be modified to be suitable for transplantation into a subject. For example, the neural cells can be modified such that an antigen (e.g., an MHC class I antigen) on the cell surface which is capable of stimulating an immune response against the cell in a subject is altered (e.g., by contact with an anti-MHC class I antibody, or a fragment or derivative thereof) to inhibit rejection of the cell when introduced into the subject or can be genetically modified to produce a factor. In one embodiment, the neural cells are obtained from a pig which is essentially free from organisms or substances which are capable of transmitting infection or disease to the recipient subject. The neural cells of the present invention can be used to treat chronic pain and/or spasticity by delivering the cells into the spinal cord of a subject.

25 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

177. Document ID: US 6436427 B1

L16: Entry 177 of 235

File: USPT

Aug 20, 2002

US-PAT-NO: 6436427

DOCUMENT-IDENTIFIER: US 6436427 B1

TITLE: Device and method for treating ophthalmic diseases

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	St. Sulpice			CH
Tsiarias; William G.	Barrington	RI		
Spear; Peter D.	Boulder	CO		

US-CL-CURRENT: 424/427; 623/4.1

ABSTRACT:

The invention provides a method for delivering biologically active molecules to the eye by implanting biocompatible capsules containing a cellular source of the biologically active molecule. Also provided is a method of treating ophthalmic diseases using biocompatible capsules.

7 Claims, 6 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Print](#) | [Claims](#) | [RQMC](#) | [Draw. Des.](#)

178. Document ID: US 6436389 B1

L16: Entry 178 of 235

File: USPT

Aug 20, 2002

US-PAT-NO: 6436389

DOCUMENT-IDENTIFIER: US 6436389 B1

TITLE: Stimulation of cell proliferation by glycosylated cystatin C

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gage; Fred Harrison	La Jolla	CA		
Taupin; Philippe J.	La Jolla	CA		
Ray; Jasodhara	San Diego	CA		

US-CL-CURRENT: 424/85.1; 424/198.1, 435/325, 435/375, 435/377, 435/4, 514/12, 514/2,
530/350, 530/399

ABSTRACT:

The present invention is based on the discovery and isolation of a co-factor for trophic factors. It has been discovered that trophic factors require a co-factor to stimulate and/or potentiate the trophic factor activity and/or specificity. This was clearly identified in low density cells where trophic factors are unable, or at best,

at minimal levels, able to proliferate undifferentiated cells without a co-factor. In a particular embodiment of the present invention, there is provided a composition comprising glycosylated cystatin C, (CCg), an FGF co-factor that stimulates proliferation of neural and fibroblast associated undifferentiated cells. The N-glycosylation of cystatin C is required for its activity. Moreover, CCg acts in cooperation with basic fibroblast growth factor (FGF-2) to induce neural progenitor cell proliferation.

12 Claims, 18 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Document](#) | [Drawings](#) | [Claims](#) | [KOMC](#) | [Draw Des](#)

179. Document ID: US 6423827 B1

L16: Entry 179 of 235

File: USPT

Jul 23, 2002

US-PAT-NO: 6423827

DOCUMENT-IDENTIFIER: US 6423827 B1

TITLE: Limbic system-associated membrane protein

DATE-ISSUED: July 23, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Levitt; Pat Ressler	Wyncote	PA		
Pimenta; Aurea	Princeton	NJ		
Fischer; Itzhak	Blue Bell	PA		
Zhukareva; Victoria	Philadelphia	PA		

US-CL-CURRENT: 530/350; 930/10

ABSTRACT:

The present invention is directed to nucleic acid sequences encoding a limbic-system associated membrane protein ("LAMP") and to purified proteins with LAMP activity. LAMP is a self-binding, antibody-like cell surface adhesion protein, the presence of which on one neuron of the limbic system stimulates the formation of connections with adjacent neurons. The invention provides a nucleic acid sequence encoding a polypeptide with at least about 90% homology to a LAMP self-binding domain, and corresponding proteins. The invention also provides nucleic acids that hybridize to LAMP encoding nucleic acids.

18 Claims, 17 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 15

[Full](#) | [Title](#) | [Cita](#) **Front** | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Document](#) | [Drawings](#) | [Claims](#) | [KOMC](#) | [Draw Des](#)

180. Document ID: US 6399369 B1

L16: Entry 180 of 235

File: USPT

Jun 4, 2002

US-PAT-NO: 6399369

DOCUMENT-IDENTIFIER: US 6399369 B1

TITLE: Multipotent neural stem cell cDNA libraries

DATE-ISSUED: June 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Reynolds; Brent	Saltspring			CA

US-CL-CURRENT: 435/320.1; 435/368, 435/6, 435/91.1, 536/23.1, 536/23.5

ABSTRACT:

cDNA libraries may be obtained from neural cell cultures produced by using growth factors to induce the proliferation of multipotent neural stem cells. The libraries may be obtained from both cultured normal and dysfunctional neural cells and from neural cell cultures at various stages of development. This information allows for the identification of the sequence of gene expression during neural development and can be used to reveal the effects of biological agents on gene expression in neural cells. Additionally, nucleic acid derived from dysfunctional tissue can be compared with that of normal tissue to identify genetic material which may be a cause of the dysfunction. This information could then be used in the design of therapies to treat the neurological disorder. A further use of the technology would be in the diagnosis of genetic disorders or for use in identifying neural cells at a particular stage in development.

5 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Comments](#) | [Drawings](#) | [Claims](#) | [KUMC](#) | [Draw. Desc](#)

181. Document ID: US 6395546 B1

L16: Entry 181 of 235

File: USPT

May 28, 2002

US-PAT-NO: 6395546

DOCUMENT-IDENTIFIER: US 6395546 B1

TITLE: Generation of dopaminergic neurons from human nervous system stem cells

DATE-ISSUED: May 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zobel; Rita	Tartu			EE
Levesque; Michel F.	Beverly Hills	CA		

US-CL-CURRENT: 435/377; 435/368

ABSTRACT:

The present invention relates to methods for generating dopaminergic neurons in vitro from embryonic and adult central nervous system cells. Specifically, these cells are isolated, cultured in vitro and stimulated to differentiate into dopaminergic neurons by down-regulating COUP-TFI and/or COUP-TFII expression or increasing NOT1 expression. These newly generated dopaminergic neurons may serve as an excellent source for cell replacement therapy in neurological disorders in which the dopaminergic system is compromised.

9 Claims, 0 Drawing figures
Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

182. Document ID: US 6392118 B1

L16: Entry 182 of 235

File: USPT

May 21, 2002

US-PAT-NO: 6392118

DOCUMENT-IDENTIFIER: US 6392118 B1

TITLE: Mx-1 conditionally immortalized cells

DATE-ISSUED: May 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Messing; Albee	Madison	WI		

US-CL-CURRENT: 800/14; 424/93.21, 435/320.1, 435/325, 435/455, 800/25

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

12 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

183. Document ID: US 6368854 B2

L16: Entry 183 of 235

File: USPT

Apr 9, 2002

TITLE: Hypoxia mediated neurogenesis

DATE-ISSUED: April 9, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Sorokan; S. Todd	Victoria			CA

US-CL-CURRENT: 435/325; 424/85.1, 435/367, 435/375, 435/378, 514/2

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

3 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Cita	Front	Review	Classification	Date	Reference	Abstract	Claims	KMM	Drawn Des
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 184. Document ID: US 6312949 B1

L16: Entry 184 of 235

File: USPT

Nov 6, 2001

TITLE: Regulation of tyrosine hydroxylase expression

DATE-ISSUED: November 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sakurada; Kazuhiro	San Diego	CA		
Palmer; Theo	San Diego	CA		
Gage; Fred H.	La Jolla	CA		

US-CL-CURRENT: 435/325; 435/183, 435/189, 435/368, 435/455, 435/6, 435/69.1, 536/23.1

ABSTRACT:

The invention relates to methods and materials involved in the regulation of tyrosine hydroxylase expression as well as the treatment of catecholamine-related diseases. Specifically, the invention provides cells that contain exogenous nucleic acid having a nucleic acid sequence that encodes Nurrl as well as methods and materials for inducing tyrosine hydroxylase expression, treating catecholamine-related deficiencies, and identifying tyrosine hydroxylase-related deficiencies.

10 Claims, 19 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 15

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KIMC](#) | [Draw. Desc.](#)

185. Document ID: US 6299895 B1

L16: Entry 185 of 235

File: USPT

Oct 9, 2001

US-PAT-NO: 6299895

DOCUMENT-IDENTIFIER: US 6299895 B1

TITLE: Device and method for treating ophthalmic diseases

DATE-ISSUED: October 9, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	St. Sulpice			CH
Tsiarias; William G.	Barrington	RI		
Spear; Peter D.	Boulder	CO		

US-CL-CURRENT: 424/427; 435/182

ABSTRACT:

A method and device for delivering a biologically active molecule to the eye, either intraocularly or periocularly, and method and device for treating ophthalmic disorders in a patient suffering therefrom.

50 Claims, 6 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Cita](#) [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KIMC](#) | [Draw. Desc.](#)

186. Document ID: US 6294346 B1

L16: Entry 186 of 235

File: USPT

Sep 25, 2001

US-PAT-NO: 6294346

DOCUMENT-IDENTIFIER: US 6294346 B1

**** See image for Certificate of Correction ****

TITLE: Use of multipotent neural stem cells and their progeny for the screening of drugs and other biological agents

DATE-ISSUED: September 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Weiss; Samuel	Calgary	CA
Reynolds; Brent	Calgary	CA
Hammang; Joseph P.	Barrington	RI
Baetge; E. Edward	Barrington	RI

US-CL-CURRENT: 435/7.21; 435/368, 435/375, 435/377

ABSTRACT:

A culture method for determining the effect of a biological agent on multipotent neural stem cell progeny is provided. In the presence of growth factors, multipotent neural stem cells are induced to proliferate in culture. The multipotent neural stem cells may be obtained from normal neural tissue or from a donor afflicted with a disease such as Alzheimer's Disease, Parkinson's Disease or Down's Syndrome. At various stages in the differentiation process of the multipotent neural stem cell progeny, the effects of a biological agent, such as a virus, protein, peptide, amino acid, lipid, carbohydrate, nucleic acid or a drug or pro-drug on cell activity are determined. Additionally, a method of screening the effects of biological agents on a clonal population of neural cells is provided. The technology provides an efficient method for the generation of large numbers of pre- and post-natal neural cells under controlled, defined conditions. The disclosed cultures provide an optimal source of normal and diseased neural cells at various developmental stages, which can be screened for potential side effects in addition to testing the action and efficacy of different biological agents.

12 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Draw](#) | [Claims](#) | [KWMC](#) | [Draw Des](#)

187. Document ID: US 6264941 B1

L16: Entry 187 of 235

File: USPT

Jul 24, 2001

US-PAT-NO: 6264941

DOCUMENT-IDENTIFIER: US 6264941 B1

TITLE: Compositions for the delivery of biologically active molecules using genetically altered cells contained in biocompatible immunoisolatory capsules

DATE-ISSUED: July 24, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 424/93.21; 424/427, 424/451, 424/457, 424/462, 424/490, 424/497

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

2 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

Full	Title	Cita	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Des.
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188. Document ID: US 6251669 B1

L16: Entry 188 of 235

File: USPT

Jun 26, 2001

US-PAT-NO: 6251669

DOCUMENT-IDENTIFIER: US 6251669 B1

TITLE: Neuronal progenitor cells and uses thereof

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Luskin; Marla B.	Decatur	GA		

US-CL-CURRENT: 435/375; 424/93.21, 435/6, 435/69.1

ABSTRACT:

The present invention provides an isolated cellular composition comprising greater than about 90% mammalian, non tumor-derived, neuronal progenitor cells which express a neuron-specific marker and which can give rise to progeny which can differentiate into neuronal cells. Also provided are methods of treating neuronal disorders utilizing this cellular composition.

16 Claims, 8 Drawing figures

Exemplary Claim Number: 1,10

Number of Drawing Sheets: 2

Full	Title	Cita	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Des.
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189. Document ID: US 6238922 B1

L16: Entry 189 of 235

File: USPT

May 29, 2001

US-PAT-NO: 6238922

DOCUMENT-IDENTIFIER: US 6238922 B1

TITLE: Use of collagenase in the preparation of neural stem cell cultures

DATE-ISSUED: May 29, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Uchida; Nobuko	Palo Alto	CA		

US-CL-CURRENT: 435/380; 435/368, 435/378, 435/381

ABSTRACT:

The invention provides a method for using collagenase to dissociate neural stem cells in neural stem cell cultures when passaging aggregated neural stem cells. The collagenase treatment results in an increased cell viability and an increased number of proliferated neural stem cells over time.

34 Claims, 1 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KINDC](#) | [Drawn Desc](#)

190. Document ID: US 6184035 B1

L16: Entry 190 of 235

File: USPT

Feb 6, 2001

US-PAT-NO: 6184035

DOCUMENT-IDENTIFIER: US 6184035 B1

TITLE: Methods for isolation and activation of, and control of differentiation from, skeletal muscle stem or progenitor cells

DATE-ISSUED: February 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csete; Marie	South Pasadena	CA		
Doyle; John	South Pasadena	CA		
Wold; Barbara	San Marino	CA		

US-CL-CURRENT: 435/377; 435/375

ABSTRACT:

The present invention provides a method of isolating, maintaining, and/or enriching for stem or progenitor cells derived from diverse organ or tissue sources. The invention specifically teaches that these can be accomplished by the controlled use of subatmospheric oxygen culture, and that the precise oxygen level or levels must be determined empirically and/or by reference to physiologic levels within intact functioning organ or tissue. In particular, culturing skeletal muscle progenitor cells in less than 12% oxygen conditions or under 1% oxygen level.

191. Document ID: US 6171610 B1

L16: Entry 191 of 235

File: USPT

Jan 9, 2001

US-PAT-NO: 6171610

DOCUMENT-IDENTIFIER: US 6171610 B1

**** See image for Certificate of Correction ****

TITLE: Guided development and support of hydrogel-cell compositions

DATE-ISSUED: January 9, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Vacanti; Charles A.	Uxbridge	MA		
Vacanti; Joseph P.	Winchester	MA		
Vacanti; Martin P.	Westborough	MA		

US-CL-CURRENT: 424/426

ABSTRACT:

The invention features a method for generating new tissue by obtaining a liquid hydrogel-cell composition including a hydrogel and tissue precursor cells; delivering the liquid hydrogel-cell composition into a permeable, biocompatible support structure; and allowing the liquid hydrogel-cell composition to solidify within the support structure and the tissue precursor cells to grow and generate new tissue. The invention also features a tissue forming structure including a permeable, biocompatible support structure having a predetermined shape that corresponds to the shape of desired tissue; and a hydrogel-cell composition at least partially filling the support structure, wherein the hydrogel-cell composition includes a hydrogel and tissue precursor cells. The new tissue forming structure can be used in new methods to generate various tissues (e.g., to treat defective tissue) including new bone, cartilage, and nervous tissue such as spinal cord tissue. The invention also new isolated nervous system stem cells.

58 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

192. Document ID: US 6165783 A

L16: Entry 192 of 235

File: USPT

Dec 26, 2000

US-PAT-NO: 6165783

DOCUMENT-IDENTIFIER: US 6165783 A

TITLE: Erythropoietin-mediated neurogenesis

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Calgary			CA
Sorokan; S. Todd	Victoria			CA

US-CL-CURRENT: 435/325; 424/85.1, 435/367, 435/375, 435/378, 514/2

ABSTRACT:

Methods are described for the production of neurons or neuronal progenitor cells. Multipotent neural stem cells are proliferated in the presence of growth factors and erythropoietin which induces the generation of neuronal progenitor cells. The erythropoietin may be exogenously applied to the multipotent neural stem cells, or alternatively, the cells can be subjected to hypoxic insult which induces the cells to express erythropoietin.

12 Claims, 0 Drawing figures

Exemplary Claim Number: 1

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Drawn Desc](#)

193. Document ID: US 6156572 A

L16: Entry 193 of 235

File: USPT

Dec 5, 2000

US-PAT-NO: 6156572

DOCUMENT-IDENTIFIER: US 6156572 A

TITLE: Bioartificial extracellular matrix containing hydrogel matrix derivatized with cell adhesive peptide fragment

DATE-ISSUED: December 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bellamkonda; Ravi	Boston	MA		
Ranieri; John P.	Lausanne			CH
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/395; 424/423, 424/488, 424/93.7, 435/177, 435/178, 435/325,
435/368, 435/397, 530/326, 530/328, 530/329, 530/402, 530/812, 530/813, 606/152

ABSTRACT:

A bioartificial extracellular matrix for use in tissue regeneration or replacement is provided by derivatizing a three-dimensional hydrogel matrix with a cell adhesive extracellular matrix protein or cell adhesive peptide fragment of the protein. Preferably, derivatizing is by covalent immobilization of a cell adhesive peptide fragment having the amino acid sequence, ArgGlyAsp, TyrIleGlySerArg or IleLysValAlaVal. Cartilage or tendon can be regenerated by implanting a matrix containing an adhesive peptide fragment that favors chondrocyte invasion. The matrix

can be pre-seeded with cells, and tissue can be reconstituted in vitro and then implanted. A cell-seeded matrix can be encapsulated in a semi-permeable membrane to form a bioartificial organ. An agarose hydrogel matrix having an agarose concentration of 0.5-1.25% (w/v) and an average pore radius between 120 nm and 290 nm is preferred. A nerve guidance channel for use in regenerating severed nerve is prepared containing a tubular semi-permeable membrane having openings adapted to receive ends of a severed nerve, and an inner lumen containing the hydrogel matrix having a bound cell adhesive peptide fragment through which the nerve can regenerate.

8 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

194. Document ID: US 6117675 A

L16: Entry 194 of 235

File: USPT

Sep 12, 2000

US-PAT-NO: 6117675

DOCUMENT-IDENTIFIER: US 6117675 A

** See image for Certificate of Correction **

TITLE: Retinal stem cells

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
van der Kooy; Derek	Toronto			CA
McInnes; Roderick	Ontario			CA
Chiasson; Bernard	York			CA
Tropepe; Vincenzo	Toronto			CA

US-CL-CURRENT: [435/354](#); [435/366](#), [435/377](#), [435/379](#), [435/384](#), [435/385](#), [435/455](#)

ABSTRACT:

The invention relates to stem cells isolated from the retina of mammals and retinal cells differentiated from these stem cells. The invention also relates to a method of isolating retinal stem cells and inducing retinal stem cells to produce retinal cells. Retinal stem cells may also be induced *in vivo* to produce retinal cells. The invention also includes pharmaceuticals made with retinal stem cells or retinal cells which may be used to restore vision lost due to diseases, disorders or abnormal physical states of the retina. The invention includes retinal stem cell and retinal cell culture systems for toxicological assays, for isolating genes involved in retinal differentiation or for developing tumor cell lines.

17 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

195. Document ID: US 6103530 A

L16: Entry 195 of 235

File: USPT

Aug 15, 2000

US-PAT-NO: 6103530.

DOCUMENT-IDENTIFIER: US 6103530 A

** See image for Certificate of Correction **

TITLE: Cultures of human CNS neural stem cells

DATE-ISSUED: August 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Lincoln	RI		

US-CL-CURRENT: 435/405; 435/325, 435/368, 435/377, 435/384, 435/387, 435/389,
435/404, 435/406

ABSTRACT:

Isolation, characterization, proliferation, differentiation and transplantation of mammalian neural stem cells is disclosed.

2 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

196. Document ID: US 6093531 A

L16: Entry 196 of 235

File: USPT

Jul 25, 2000

US-PAT-NO: 6093531

DOCUMENT-IDENTIFIER: US 6093531 A

TITLE: Generation of hematopoietic cells from multipotent neural stem cells

DATE-ISSUED: July 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bjornson; Christopher R.	Seattle	WA		
Rietze; Rod L.	Brunswick			AU
Reynolds; Brent A.	Saltspring			CA
Vescovi; Angelo L.	Milan			IT

US-CL-CURRENT: 435/1.1; 424/93.21, 435/325

ABSTRACT:

Multipotent neural stem cell (MNSC) progeny are induced to generate cells of the hematopoietic system by placing the MNSC progeny in a hematopoietic-inducing environment. The hematopoietic-inducing environment can be either ex vivo or in vivo.

A mammal's circulatory system provides an in vivo environment that can induce xenogeneic, allogeneic, or autologous MNSC progeny to generate a full complement of hematopoietic cells. Transplantation of MNSC progeny provides an alternative to bone marrow and hematopoietic stem cell transplantation to treat blood-related disorders.

16 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KUMC](#) | [Draw Des](#)

197. Document ID: US 6071889 A

L16: Entry 197 of 235

File: USPT

Jun 6, 2000

US-PAT-NO: 6071889
DOCUMENT-IDENTIFIER: US 6071889 A

TITLE: In vivo genetic modification of growth factor-responsive neural precursor cells

DATE-ISSUED: June 6, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 514/44; 424/93.1, 424/93.2, 424/93.21, 435/440, 435/455

ABSTRACT:

Methods for administering genetic material to dividing neural precursor cell populations in vivo are provided. The genetic material may comprise useful genes for neurotransmitters, growth factors, growth factor receptors, and the like. The genetic material is administered to the brain with one or more growth factors. The growth factors induce proliferation of neural precursor cells, thereby facilitating the incorporation of the genetic material into the cell progeny.

14 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KUMC](#) | [Draw Des](#)

198. Document ID: US 6040180 A

L16: Entry 198 of 235

File: USPT

Mar 21, 2000

US-PAT-NO: 6040180
DOCUMENT-IDENTIFIER: US 6040180 A

TITLE: In vitro generation of differentiated neurons from cultures of mammalian multipotential CNS stem cells

DATE-ISSUED: March 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johe; Karl K.	Potomac	MD		

US-CL-CURRENT: 435/377; 435/325, 435/353, 435/368

ABSTRACT:

The present invention reveals in vitro cultures of region-specific, terminally differentiated, mature neurons derived from cultures of mammalian multipotential CNS stem cells and an in vitro procedure by which the differentiated neurons may be generated. The procedure involves the culturing of multipotential CNS stem cells from a specific region in a chemically defined serum-free culture medium containing a growth factor; replacing the medium with growth factor-free medium; harvesting the stem cells by trypsinization; plating the stem cells at a density of between 100,000 to 250,000 cells per square centimeter; and culturing the stem cells in a glutamic acid-free chemically defined serum-free culture medium.

6 Claims, 80 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 23

[Full](#) | [Title](#) | [Cita](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KWMC](#) | [Draw. Desc](#)

199. Document ID: US 6033906 A

L16: Entry 199 of 235

File: USPT

Mar 7, 2000

US-PAT-NO: 6033906

DOCUMENT-IDENTIFIER: US 6033906 A

TITLE: Methods for differentiating neural stem cells to glial cells using neuregulins

DATE-ISSUED: March 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		

US-CL-CURRENT: 435/325; 435/353, 435/368

ABSTRACT:

Method for producing a population of mammalian glial cells comprising contacting at least one mammalian neural stem cell with a culture medium containing a neuregulin and detecting the differentiation of stem cell to a population of glial cells.

17 Claims, 60 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 22

200. Document ID: US 6001654 A

L16: Entry 200 of 235

File: USPT

Dec 14, 1999

US-PAT-NO: 6001654

DOCUMENT-IDENTIFIER: US 6001654 A

**** See image for Certificate of Correction ****

TITLE: Methods for differentiating neural stem cells to neurons or smooth muscle cells using TGF-.beta. super family growth factors

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Shah; Nirao M.	New York	NY		

US-CL-CURRENT: 435/377; 435/325, 435/352, 435/353, 435/368, 435/375

ABSTRACT:

Method for producing a population of mammalian neurons and/or smooth muscle cells comprising contacting at least one mammalian neural stem cell with a culture medium containing one or more growth factors from the TGF-.beta. super family and detecting the differentiation of stem cell to a population of neurons or smooth muscle cells.

22 Claims, 25 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 28

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Terms	Documents
L15 AND neural stem cell	235

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201. Document ID: US 5981165 A

Using default format because multiple data bases are involved.

L16: Entry 201 of 235

File: USPT

Nov 9, 1999

US-PAT-NO: 5981165

DOCUMENT-IDENTIFIER: US 5981165 A

TITLE: In vitro induction of dopaminergic cells

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA

US-CL-CURRENT: 435/4; 424/93.7, 435/325, 514/2, 530/399

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Bkwd Refs](#) | [Claims](#) | [KMMI](#) | [Drawn Desc](#)

202. Document ID: US 5980885 A

L16: Entry 202 of 235

File: USPT

Nov 9, 1999

US-PAT-NO: 5980885

DOCUMENT-IDENTIFIER: US 5980885 A

TITLE: Growth factor-induced proliferation of neural precursor cells in vivo

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA

US-CL-CURRENT: 424/93.21; 424/93.1, 424/93.2, 435/325, 435/360, 435/366, 435/368,
435/377, 435/383, 435/384, 435/440, 435/455, 435/456, 435/457, 514/2, 514/44

ABSTRACT:

A method is described for inducing in vivo proliferation of precursor cells located in mammalian neural tissue by administering to the mammal a fibroblast growth factor and at least one additional growth factor selected from the group consisting of epidermal growth factor, transforming growth factor alpha, and amphiregulin. The

method can be used to replace damaged or missing neurons and/or glia. Another method is described for transplanting multipotent neural stem cell progeny into a mammal. The method comprises the steps of administering growth factors to a mammal to induce in vivo proliferation of neural precursor cells, removing the precursor cell progeny from the mammal, culturing the removed cells in vitro in the presence of one or more growth factors that induces multipotent neural stem cell proliferation, and implanting the multipotent neural stem cell progeny into the mammal.

11 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Accumulation](#) | [Search](#) | [Claims](#) | [KIMC](#) | [Draw. Desc.](#)

203. Document ID: US 5968829 A

L16: Entry 203 of 235

File: USPT

Oct 19, 1999

US-PAT-NO: 5968829

DOCUMENT-IDENTIFIER: US 5968829 A

TITLE: Human CNS neural stem cells

DATE-ISSUED: October 19, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Carpenter; Melissa	Lincoln	RI		

US-CL-CURRENT: 435/467; 424/93.7, 435/368, 435/377

ABSTRACT:

Isolation, characterization, proliferation, differentiation and transplantation of mammalian neural stem cells is disclosed.

13 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Accumulation](#) | [Search](#) | [Claims](#) | [KIMC](#) | [Draw. Desc.](#)

204. Document ID: US 5958767 A

L16: Entry 204 of 235

File: USPT

Sep 28, 1999

US-PAT-NO: 5958767

DOCUMENT-IDENTIFIER: US 5958767 A

TITLE: Engraftable human neural stem cells

DATE-ISSUED: September 28, 1999

INVENTOR-INFORMATION:

http://westbrs:9000/bin/cgi-bin/accum_query.pl

12/8/04

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snyder; Evan Y.	Jamaica Plain	MA		
Wolfe; John H.	Philadelphia	PA		
Kim; Seung U.	Vancouver			CA

US-CL-CURRENT: 435/368; 435/455

ABSTRACT:

Stable clones of neural stem cells (NSCs) have been isolated from the human fetal telencephalon. In vitro, these self-renewing clones (affirmed by retroviral insertion site) can spontaneously give rise to all 3 fundamental neural cell types (neurons, oligodendrocytes, astrocytes). Following transplantation into germinal zones of the developing newborn mouse brain, they, like their rodent counterparts, can participate in aspects of normal development, including migration along well-established migratory pathways to disseminated CNS regions, differentiation into multiple developmentally- and regionally-appropriate cell types in response to microenvironmental cues, and non-disruptive, non-tumorigenic interspersion with host progenitors and their progeny. Readily genetically engineered prior to transplantation, human NSCs are capable of expressing foreign transgenes in vivo in these disseminated locations. Further supporting their potential for gene therapeutic applications, the secretory products from these NSCs can cross-correct a prototypical genetic metabolic defect in abnormal neurons and glia in vitro as effectively as do murine NSCs. Finally, human cells appear capable of replacing specific deficient neuronal populations in a mouse model of neurodegeneration and impaired development, much as murine NSCs could. Human NSCs may be propagated by a variety of means--both epigenetic (e.g., chronic mitogen exposure) and genetic (transduction of the propagating gene *vmyc*)--that are comparably safe (*vmyc* is constitutively downregulated by normal developmental mechanisms and environmental cues) and effective in yielding engraftable, migratory clones, suggesting that investigators may choose the propagation technique that best serves the demands of a particular research or clinical problem. All clones can be cryopreserved and transplanted into multiple hosts in multiple settings.

3 Claims, 43 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Draw. Des.](#)

205. Document ID: US 5935849 A

L16: Entry 205 of 235

File: USPT

Aug 10, 1999

US-PAT-NO: 5935849

DOCUMENT-IDENTIFIER: US 5935849 A

TITLE: Methods and compositions of growth control for cells encapsulated within bioartificial organs

DATE-ISSUED: August 10, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Bristol	RI		
Shoichet; Molly S.	Canton	MA		

Gentile; Frank T.	Warwick	RI
Hammang; Joseph P.	Barrington	RI
Holland; Laura M.	Providence	RI
Cain; Brian M.	Everett	MA
Doherty; Edward J.	Mansfield	MA
Winn; Shelley R.	Smithfield	RI
Aebischer; Patrick	Lutry	

CH

US-CL-CURRENT: 435/325; 435/375, 435/377, 435/400

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

7 Claims, 8 Drawing figures

Exemplary Claim Number: 1,5

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Edit](#) | [Claims](#) | [KIMC](#) | [Draw. Des.](#)

206. Document ID: US 5928947 A

L16: Entry 206 of 235

File: USPT

Jul 27, 1999

US-PAT-NO: 5928947

DOCUMENT-IDENTIFIER: US 5928947 A

TITLE: Mammalian multipotent neural stem cells

DATE-ISSUED: July 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/455; 424/93.7, 435/325, 435/440, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The

invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

6 Claims, 20 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 22

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KWMC](#) | [Draw. Desc.](#)

207. Document ID: US 5908623 A

L16: Entry 207 of 235

File: USPT

Jun 1, 1999

US-PAT-NO: 5908623

DOCUMENT-IDENTIFIER: US 5908623 A

TITLE: Compositions and methods for the delivery of biologically active molecules using genetically altered cells contained in biocompatible immunoisolatory capsules

DATE-ISSUED: June 1, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 424/93.21; 424/93.2

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation *in vivo* upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the *in vivo* expression of transgenes.

9 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

208. Document ID: US 5904144 A

L16: Entry 208 of 235

File: USPT

May 18, 1999

US-PAT-NO: 5904144

DOCUMENT-IDENTIFIER: US 5904144 A

TITLE: Method for treating ophthalmic diseases

DATE-ISSUED: May 18, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		
Spear; Peter D.	Madison	WI		
Tsiaras; William G.	Barrington	RI		

US-CL-CURRENT: 128/898; 604/890.1, 623/6.57

ABSTRACT:

The present invention provides novel devices and methods for continuous, controlled delivery of a biologically active molecule to the eye, either intraocularly or periorocularly, to treat ophthalmic disorders. A capsule is surgically placed in the desired location in the eye. The capsule includes cells which produce the biologically active molecule. The capsule also includes a surrounding biocompatible jacket through which the biologically active molecule may diffuse into the eye. This jacket may immunoisolate the encapsulated cells, protecting them from attack by the immune system of the patient.

13 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

 209. Document ID: US 5874099 A

L16: Entry 209 of 235

File: USPT

Feb 23, 1999

US-PAT-NO: 5874099

DOCUMENT-IDENTIFIER: US 5874099 A

TITLE: Methods for making immunoisolatory implantable vehicles with a biocompatible jacket and a biocompatible matrix core

DATE-ISSUED: February 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Dionne; Keith E.	Rehoboth	MA
Emerich; Dwaine F.	Providence	RI
Hoffman; Diane	Cambridge	MA
Sanberg; Paul R.	Spring Hill	FL
Christenson; Lisa	New Haven	CT
Hegre; Orion D.	Green Valley	AZ
Scharp; David W.	St. Louis	MO
Lacy; Paul E.	Webster Grove	MO
Aebischer; Patrick	Lutry	CH
Vasoochcellos; Alfred V.	Cranston	RI
Lysaght; Michael J.	E. Greenwich	RI
Gentile; Frank T.	Warwich	RI

US-CL-CURRENT: 424/422, 424/423, 424/424, 424/426, 424/427, 424/430, 424/434,
424/437, 424/489, 424/490

ABSTRACT:

A method of forming an implantable and retrievable immunoisolatory vehicles is disclosed, the method comprising the steps of first forming a core comprising a volume of at least 1. ^{mu}l and at least 10.^{sup.4} cells capable of providing a biologically active product or metabolic or immunologic function, said cells being dispersed in a biocompatible hydrogel or extracellular matrix, and then forming around the core a surrounding external biocompatible thermoplastic or hydrogel jacket free of said cells projecting externally thereof, said jacket having molecular weight cutoff permitting passage of molecules to and from the core through said jacket to provide said biologically active product or function.

28 Claims, 15 Drawing figures

Exemplary Claim Number: 3

Number of Drawing Sheets: 9

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KINN](#) | [Draw Desc](#)

210. Document ID: US 5871767 A

L16: Entry 210 of 235

File: USPT

Feb 16, 1999

US-PAT-NO: 5871767

DOCUMENT-IDENTIFIER: US 5871767 A

TITLE: Methods for treatment or prevention of neurodegenerative conditions using immunoisolatory implantable vehicles with a biocompatible jacket and a biocompatible matrix core

DATE-ISSUED: February 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dionne; Keith E.	Rehoboth	MA		
Emerich; Dwaine F.	Providence	RI		
Hoffman; Diane	Cambridge	MA		
Sanberg; Paul R.	Spring Hill	FL		

Christenson; Lisa	New Haven	CT
Hegre; Orion D.	Green Valley	AZ
Scharp; David W.	St. Louis	MO
Lacy; Paul E.	Webster Grove	MO
Aebischer; Patrick	Lutry	CH
Vasconcellos; Alfred V.	Cranston	RI
Lysaght; Michael J.	E. Greenwich	RI
Gentile; Frank T.	Warwich	RI

US-CL-CURRENT: 424/422, 424/423, 424/424, 424/426, 424/427, 424/430, 424/434,
424/437, 424/489, 424/490

ABSTRACT:

A method for treatment of a neurodegenerative condition in a patient comprising implanting in the patient at least one immunoisolatory vehicle comprising a core comprising a volume of at least 1 .mu.l and at least 10.sup.4 living cells which secrete at least one biologically active product, said cells being dispersed in a biocompatible matrix comprising a hydrogel or extracellular matrix components, and an external jacket surrounding the core, the jacket comprising a biocompatible hydrogel or thermoplastic, the jacket being free of cells projecting externally thereof, said jacket having a molecular weight cutoff permitting the passage of the biologically active product from the core through the jacket.

45 Claims, 15 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMC	Draw. Des.
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211. Document ID: US 5861283 A

L16: Entry 211 of 235

File: USPT

Jan 19, 1999

US-PAT-NO: 5861283

DOCUMENT-IDENTIFIER: US 5861283 A

TITLE: DNA encoding a limbic system-associated membrane protein

DATE-ISSUED: January 19, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Levitt; Pat Ressler	Wyncote	PA		
Pimenta; Aurea	Princeton	NJ		
Fischer; Itzhak	Blue Bell	PA		
Zhukareva; Victoria	Philadelphia	PA		

US-CL-CURRENT: 435/69.4, 435/252.3, 435/320.1, 435/325, 536/23.1, 536/23.51, 536/24.1

ABSTRACT:

The present invention is directed to nucleic acid sequences encoding a limbic-system associated membrane protein ("LAMP") and to purified proteins with LAMP activity.

LAMP is a self-binding, antibody-like cell surface adhesion protein, the presence of which on one neuron of the limbic system stimulates the formation of connections with adjacent neurons. The invention provides a nucleic acid sequence encoding a polypeptide with at least about 90% homology to a LAMP self-binding domain, and corresponding proteins. The invention also provides nucleic acids that hybridize to LAMP encoding nucleic acids.

16 Claims, 11 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw Des
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212. Document ID: US 5858747 A

L16: Entry 212 of 235

File: USPT

Jan 12, 1999

US-PAT-NO: 5858747

DOCUMENT-IDENTIFIER: US 5858747 A

TITLE: Control of cell growth in a bioartificial organ with extracellular matrix coated microcarriers

DATE-ISSUED: January 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/182, 424/422, 424/93.21, 424/93.7, 435/176, 435/177, 435/178, 435/289.1, 435/377, 435/382, 435/395, 435/403

ABSTRACT:

Methods and compositions are provided for controlling cell distribution within an implantable bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the bioartificial organ with extracellular matrix molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination. The bioartificial organ typically has a semipermeable membrane encapsulating a cell-containing core, and is preferably immunoisolatory. Cells can be grown on microcarriers and then loaded into the bioartificial organ. The microcarriers may be coated with an extracellular matrix

component such as collagen to cause decreased cell proliferation or increased cell differentiation. Microcarriers containing cells can be suspended in a proliferation inhibiting hydrogel matrix prior to encapsulation.

11 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

213. Document ID: US 5853717 A

L16: Entry 213 of 235

File: USPT

Dec 29, 1998

US-PAT-NO: 5853717

DOCUMENT-IDENTIFIER: US 5853717 A

TITLE: Methods and compositions of growth control for cells encapsulated within bioartificial organs

DATE-ISSUED: December 29, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinstitute; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CA

US-CL-CURRENT: 424/93.21; 435/326, 435/372.2, 435/372.3, 435/382

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

14 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Claims](#) | [KOMC](#) | [Drawn Desc](#)

214. Document ID: US 5851832 A

L16: Entry 214 of 235

File: USPT

Dec 22, 1998

US-PAT-NO: 5851832

DOCUMENT-IDENTIFIER: US 5851832 A

TITLE: In vitro growth and proliferation of multipotent neural stem cells and their progeny

DATE-ISSUED: December 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 435/368; 435/325, 435/366, 435/377, 435/383, 435/384

ABSTRACT:

A method for the in vitro proliferation and differentiation of neural stem cells and stem cell progeny comprising the steps of (a) isolating the cells from a mammal, (b) exposing the cells to a culture medium containing a growth factor, (c) inducing the cells to proliferate, and (d) inducing the cells to differentiate is provided.

80 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Detailed Description](#) | [Claims](#) | [KOMC](#) | [Draw. Desc.](#)

215. Document ID: US 5849553 A

L16: Entry 215 of 235

File: USPT

Dec 15, 1998

US-PAT-NO: 5849553

DOCUMENT-IDENTIFIER: US 5849553 A

TITLE: Mammalian multipotent neural stem cells

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/467; 435/320.1, 435/325, 435/353, 435/368, 435/455, 435/462,
435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell, and immortalized cell lines which are capable of subsequent disimmortalization. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

25 Claims, 111 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 44

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KNOC](#) | [Draw. Desc](#)

216. Document ID: US 5843431 A

L16: Entry 216 of 235

File: USPT

Dec 1, 1998

US-PAT-NO: 5843431

DOCUMENT-IDENTIFIER: US 5843431 A

TITLE: Controlling proliferation of cells before and after encapsulation in a bioartificial organ by gene transformation

DATE-ISSUED: December 1, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 424/93.21; 424/422, 424/93.7, 435/174, 435/178, 435/377, 435/382,
435/395, 435/467

ABSTRACT:

Methods and compositions are provided for controlling cell distribution within an implantable bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure

to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the bioartificial organ with extracellular matrix molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination. Cells can be transformed with a proliferation-promoting gene such as the oncogene, SV40, linked to a regulatable promoter such as the Mx1 promoter, the promotor is activated in vitro to express the gene to result in cell proliferation, and the promotor is inactivated before or after insertion of the cells in the bioartificial organ to inhibit expression of the gene to reduce or stop cell proliferation in vivo. The promoter can be reactivated in vivo to again express the gene to result in further cell proliferation. The gene may be a proliferation-suppressing gene such as p53 gene or RB gene, or a differentiation-inducing gene such as high mobility group chromosomal protein 14. Inhibiting gene expression in vitro causes cell proliferation, and inducing gene expression reduces or stops cell proliferation in vivo.

10 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

217. Document ID: US 5840576 A

L16: Entry 217 of 235

File: USPT

Nov 24, 1998

US-PAT-NO: 5840576

DOCUMENT-IDENTIFIER: US 5840576 A

TITLE: Methods and compositions of growth control for cells encapsulated within bioartificial organs

DATE-ISSUED: November 24, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinstine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/325; 435/375, 435/377, 435/400

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a

proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

4 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

218. Document ID: US 5834029 A

L16: Entry 218 of 235

File: USPT

Nov 10, 1998

US-PAT-NO: 5834029

DOCUMENT-IDENTIFIER: US 5834029 A

TITLE: Nerve guidance channel containing bioartificial three-dimensional hydrogel extracellular matrix derivatized with cell adhesive peptide fragment

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bellamkonda; Ravi	Boston	MA		
Ranieri; John P.	Lausanne			CH
Aebischer; Patrick	Uttry			CH

US-CL-CURRENT: 424/570; 424/93.7, 435/177, 435/178, 435/368, 435/395, 435/397,
435/402, 530/326, 530/328, 530/329, 530/402, 606/152

ABSTRACT:

A bioartificial three-dimensional hydrogel extracellular matrix derivatized with a cell adhesive peptide fragment is provided for use in tissue regeneration or replacement. The choice of adhesive peptide fragment depends on the desired target cell type. Cartilage or tendon can be regenerated by implanting a matrix containing adhesive peptide fragments that favor chondrocyte invasion. The matrix can be pre-seeded with cells, and tissue can be reconstituted in vitro and then implanted. A cell-seeded matrix can be encapsulated in a semi-permeable membrane to form a bioartificial organ. An agarose hydrogel matrix having an agarose concentration of 0.5-1.25% (w/v) and an average gel pore radius between 120 nm and 290 nm is preferred. The peptide fragment preferably contains the sequence, ArgGlyAsp or TyrIleGlySerArg or IleLysValAlaVal, and is covalently immobilized to the matrix. A nerve guidance channel for use in regenerating severed nerve is prepared containing a tubular semi-permeable membrane having openings adapted to receive the ends of a severed nerve, and an inner lumen containing the matrix having an adhesive peptide fragment through which the nerve can regenerate.

9 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

219. Document ID: US 5834001 A

L16: Entry 219 of 235

File: USPT

Nov 10, 1998

US-PAT-NO: 5834001

DOCUMENT-IDENTIFIER: US 5834001 A

TITLE: Methods for making immunoisolatory implantable vehicles with a biocompatiable jacket and a biocompatible matrix core

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dionne; Keith E.	Rehoboth	MA		
Emerich; Dwaine F.	Providence	RI		
Hoffman; Diane	Cambridge	MA		
Sanberg; Paul R.	Spring Hill	FL		
Christenson; Lisa	New Haven	CT		
Hegre; Orion D.	Green Valley	AZ		
Sharp; David W.	St. Louis	MO		
Lacy; Paul E.	Webster Grove	MO		
Aebischer; Patrick	Lutry			CH
Vasconcellos; Alfred V.	Cranston	RI		
Lysaght; Michael J.	Greenwich	RI		
Gentile; Frank T.	Warwick	RI		

US-CL-CURRENT: 424/422; 424/423, 424/424, 424/426, 424/427, 424/430, 424/434,
424/437, 424/489, 424/490

ABSTRACT:

A method of forming an implantable and retrievable immunoisolatory vehicle is disclosed, the method comprising the steps of first forming a jacket of biocompatible thermoplastic or hydrogel, and then loading the jacket with a core comprising a volume of at least 1 .mu.l and at least 10.sup.4 cells capable of secreting a biocompatible matrix comprising a hydrogel or extracellular matrix, said jacket having a molecular weight cutoff permitting passage of molecules thereacross to provide said biologically active product or said function.

25 Claims, 15 Drawing figures

Exemplary Claim Number: 5

Number of Drawing Sheets: 9

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Edit](#) | [Claims](#) | [KINIC](#) | [Draw. Des.](#)

220. Document ID: US 5833979 A

L16: Entry 220 of 235

File: USPT

Nov 10, 1998

US-PAT-NO: 5833979

DOCUMENT-IDENTIFIER: US 5833979 A

TITLE: Methods and compositions of growth control for cells encapsulated within bioartificial organs

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schininstine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 424/93.21; 424/553, 424/556, 435/174, 435/352

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination.

2 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KOMC](#) | [Draw Desc](#)

221. Document ID: US 5824489 A

L16: Entry 221 of 235

File: USPT

Oct 20, 1998

US-PAT-NO: 5824489

DOCUMENT-IDENTIFIER: US 5824489 A

TITLE: In vitro method for obtaining an isolated population of mammalian neural crest stem cells

DATE-ISSUED: October 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Pasadena	CA		

ABSTRACT:

The invention includes methods for the isolation and clonal propagation of mammalian neural stem cells. The methods employ a novel separation and culturing regimen and bioassays for establishing the generation of neural stem cell derivatives. These methods result in the production of non-transformed neural stem cells and their progeny. The invention demonstrates, at the clonal level, the self regeneration and asymmetrical division of mammalian neural stem cells for the first time in feeder cell-independent cultures. Lineage restriction is demonstrated within a developing clone and is shown to be sensitive to the local environment. Multipotent neural stem cells cultured on a mixed substrate of poly-D-lysine and fibronectin generate PNS neurons and glia, but on fibronectin alone the stem cells generate PNS glia but not neurons. The neurogenic potential of the stem cells, while not expressed, is maintained over time on fibronectin. The invention further includes transplantation assays which allow for the identification of mammalian neural stem cells from various tissues. It also includes methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals.

21 Claims, 48 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 16

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMPC	Draw. Des.
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 222. Document ID: US 5800829 A

L16: Entry 222 of 235

File: USPT

Sep 1, 1998

US-PAT-NO: 5800829

DOCUMENT-IDENTIFIER: US 5800829 A

TITLE: Methods for coextruding immunoisolatory implantable vehicles with a biocompatible jacket and a biocompatible matrix core

DATE-ISSUED: September 1, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dionne; Keith E.	Rehoboth	MA		
Emerich; Dwaine F.	Providence	RI		
Hoffman; Diane	Cambridge	MA		
Sanberg; Paul R.	Spring Hill	FL		
Christenson; Lisa	New Haven	CT		
Hegre; Orion D.	Green Valley	AZ		
Scharp; David W.	St. Louis	MO		
Lacy; Paul E.	Webster Grove	MO		
Aebischer; Patrick	Lutry			CH
Vasconcellos; Alfred V.	Cranston	RI		
Lysaght; Michael J.	E. Greenwich	RI		
Gentile; Frank T.	Warwich	RI		

ABSTRACT:

A method of making an immunoisolatory vehicle comprised of a core comprising living cells dispersed in a biocompatible matrix is disclosed, the cells being capable of secreting a biologically active product or of providing a metabolic or immunologic function to an individual, and an external jacket surrounding said core which is a biocompatible, permselective thermoplastic or hydrogel, said jacket being free of said cells, comprising coextruding a suspension comprising said cells dispersed in a precursor matrix material comprising extracellular matrix components or a biocompatible hydrogel precursor, and a solution of a biocompatible jacket precursor from a nested dual-bore extrusion nozzle, wherein the suspension of (a) is coextruded from the inner bore and the solution of (b) is coextruded from the outer bore of the nozzle, to form said jacket as the solution of (b) and the suspension of (a) are coextruded; and exposing the vehicle to a treatment that forms a core comprising a volume of at least 1 .mu.l and at least 10.sup.4 cells and comprising a biocompatible matrix from the precursor matrix of solution (a).

27 Claims, 15 Drawing figures

Exemplary Claim Number: 6

Number of Drawing Sheets: 9

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

223. Document ID: US 5795790 A

L16: Entry 223 of 235

File: USPT

Aug 18, 1998

US-PAT-NO: 5795790

DOCUMENT-IDENTIFIER: US 5795790 A

TITLE: Method for controlling proliferation and differentiation of cells encapsulated within bioartificial organs

DATE-ISSUED: August 18, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Ben Salem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/382; 424/93.7, 435/177, 435/178, 435/180, 435/182

ABSTRACT:

Methods and compositions are provided for controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or

a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the bioartificial organ with extracellular matrix molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination. In a preferred treatment, cells are exposed to and then removed from exposure to a proliferation-stimulating and differentiation inhibiting compound prior to encapsulation of the cells in a semipermeable biocompatible jacket to form a bioartificial organ. Upon in vivo implantation of the bioartificial organ in a host, cellular proliferation is inhibited and cellular differentiation is promoted.

10 Claims, 8 Drawing figures

Exemplary Claim Number: 6

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawn Des.
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224. Document ID: US 5776747 A

L16: Entry 224 of 235

File: USPT

Jul 7, 1998

US-PAT-NO: 5776747

DOCUMENT-IDENTIFIER: US 5776747 A

TITLE: Method for controlling the distribution of cells within a bioartificial organ using polyethylene oxide-poly (dimethylsiloxane) copolymer

DATE-ISSUED: July 7, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schinistine; Malcolm	Bensalem	PA		
Shoichet; Molly S.	Toronto			CA
Gentile; Frank T.	Warwick	RI		
Hammang; Joseph P.	Barrington	RI		
Holland; Laura M.	Horsham	PA		
Cain; Brian M.	Everett	MA		
Doherty; Edward J.	Mansfield	MA		
Winn; Shelley R.	Smithfield	RI		
Aebischer; Patrick	Lutry			CH

US-CL-CURRENT: 435/177; 435/180, 435/181, 435/182

ABSTRACT:

This invention relates to methods and compositions of controlling cell distribution within a bioartificial organ by exposing the cells to a treatment that inhibits cell proliferation, promotes cell differentiation, or affects cell attachment to a growth surface within the bioartificial organ. Such treatments include (1) genetically manipulating cells, (2) exposing the cells to a proliferation-inhibiting compound or a differentiation-inducing compound or removing the cells from exposure to a proliferation-stimulating compound or a differentiation-inhibiting compound; exposing the cells to irradiation, and (3) modifying a growth surface of the BAO with ECM molecules, molecules affecting cell proliferation or adhesion, or an inert scaffold, or a combination thereof. These treatments may be used in combination. A particular embodiment is directed to derivatizing or adsorbing polyethylene oxide-poly

(dimethylsiloxane) copolymer (PEO-PDMS) onto a surface within the bioartificial organ to inhibit cellular attachment.

2 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

225. Document ID: US 5753506 A

L16: Entry 225 of 235

File: USPT

May 19, 1998

US-PAT-NO: 5753506

DOCUMENT-IDENTIFIER: US 5753506 A

TITLE: Isolation propagation and directed differentiation of stem cells from embryonic and adult central nervous system of mammals

DATE-ISSUED: May 19, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johe; Karl K.	Potomac	MD		

US-CL-CURRENT: 435/377; 435/325, 435/366, 435/368

ABSTRACT:

The present invention reveals an in vitro procedure by which a homogeneous population of multipotential precursor cells from mammalian embryonic neuroepithelium (CNS stem cells) can be expanded up to 10.^{sup.9} fold in culture while maintaining their multipotential capacity to differentiate into neurons, oligodendrocytes, and astrocytes. Chemically defined conditions are presented that enable a large number of neurons, up to 50% of the expanded cells, to be derived from the stem cells. In addition, four factors--PDGF, CNTF, LIF, and T3--have been identified which, individually, generate significantly higher proportions of neurons, astrocytes, or oligodendrocytes. These defined procedures permit a large-scale preparation of the mammalian CNS stem cells, neurons, astrocytes, and oligodendrocytes under chemically defined conditions with efficiency and control. These cells should be an important tool for many cell- and gene-based therapies for neurological disorders.

16 Claims, 46 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 11

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Draw. Des.](#)

226. Document ID: US 5753505 A

L16: Entry 226 of 235

File: USPT

May 19, 1998

US-PAT-NO: 5753505

DOCUMENT-IDENTIFIER: US 5753505 A

TITLE: Neuronal progenitor cells and uses thereof

DATE-ISSUED: May 19, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Luskin; Marla B.	Decatur	GA		

US-CL-CURRENT: 435/375; 424/93.21, 435/6, 435/69.1

ABSTRACT:

The present invention provides an isolated cellular composition comprising greater than about 90% mammalian, non tumor-derived, neuronal progenitor cells which express a neuron-specific marker and which can give rise to progeny which can differentiate into neuronal cells. Also provided are methods of treating neuronal disorders utilizing this cellular composition.

6 Claims, 8 Drawing figures

Exemplary Claim Number: 1,2

Number of Drawing Sheets: 2

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMM](#) | [Draw. Des.](#)

227. Document ID: US 5750376 A

L16: Entry 227 of 235

File: USPT

May 12, 1998

US-PAT-NO: 5750376

DOCUMENT-IDENTIFIER: US 5750376 A

TITLE: In vitro growth and proliferation of genetically modified multipotent neural stem cells and their progeny

DATE-ISSUED: May 12, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weiss; Samuel	Alberta			CA
Reynolds; Brent	Alberta			CA
Hammang; Joseph P.	Barrington	RI		
Baetge; E. Edward	Barrington	RI		

US-CL-CURRENT: 435/69.52; 435/325, 435/368, 435/377, 435/384, 435/392, 435/395,
435/455, 435/456, 435/458, 435/461, 435/69.1

ABSTRACT:

A method for producing genetically modified neural cells comprises culturing cells derived from embryonic, juvenile, or adult mammalian neural tissue with one or more growth factors that induce multipotent neural stem cells to proliferate and produce multipotent neural stem cell progeny which include more daughter multipotent neural stem cells and undifferentiated progeny that are capable of differentiating into neurons, astrocytes, and oligodendrocytes. The proliferating neural cells can be transfected with exogenous DNA to produce genetically modified neural stem cell

progeny. The genetic modification can be for the production of biologically useful proteins such as growth factor products, growth factor receptors, neurotransmitters, neurotransmitter receptors, neuropeptides and neurotransmitter synthesizing genes. The multipotent neural stem cell progeny can be continuously passaged and proliferation reinitiated in the presence of growth factors to result in an unlimited supply of neural cells for transplantation and other purposes. Culture conditions can be provided that induce the genetically modified multipotent neural stem cell progeny to differentiate into neurons, astrocytes, and oligodendrocytes *in vitro*.

40 Claims, 9 Drawing figures
Exemplary Claim Number: 1,8,9
Number of Drawing Sheets: 3

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

228. Document ID: US 5693482 A

L16: Entry 228 of 235

File: USPT

Dec 2, 1997

US-PAT-NO: 5693482

DOCUMENT-IDENTIFIER: US 5693482 A

TITLE: Neural crest stem cell assay

DATE-ISSUED: December 2, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton.	MA		

US-CL-CURRENT: 435/29

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

8 Claims, 62 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 23

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KOMC](#) | [Drawn Des.](#)

229. Document ID: US 5676943 A

http://westibr:9000/bin/cgi-bin/accum_query.pl

12/8/04

US-PAT-NO: 5676943

DOCUMENT-IDENTIFIER: US 5676943 A

TITLE: Compositions and methods for the delivery of biologically active molecules using genetically altered cells contained in biocompatible immunoisolatory capsules

DATE-ISSUED: October 14, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 424/93.21; 424/93.3

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

7 Claims, 14 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Chemical	Claims	KMIC	Draw. Des.
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 230. Document ID: US 5672499 A

L16: Entry 230 of 235

File: USPT

Sep 30, 1997

US-PAT-NO: 5672499

DOCUMENT-IDENTIFIER: US 5672499 A

TITLE: Immortalized neural crest stem cells and methods of making

DATE-ISSUED: September 30, 1997

INVENTOR-INFORMATION:

http://westbrs:9000/bin/cgi-bin/accum_query.pl

12/8/04

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/353; 435/320.1, 435/325, 435/368, 435/467, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

8 Claims, 62 Drawing figures

Exemplary Claim Number: 1,2

Number of Drawing Sheets: 23

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Help](#) | [Claims](#) | [KMC](#) | [Draw Des](#)

231. Document ID: US 5656481 A

L16: Entry 231 of 235

File: USPT

Aug 12, 1997

US-PAT-NO: 5656481

DOCUMENT-IDENTIFIER: US 5656481 A

TITLE: Compositions and methods for the delivery of biologically active molecules using cells contained in biocompatible capsules

DATE-ISSUED: August 12, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 435/325; 424/93.1, 424/93.2, 424/93.21, 424/93.3, 424/93.7, 435/347,
435/373, 435/382

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active

molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

9 Claims, 14 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KOMC	Draw. Des.
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232. Document ID: US 5654183 A

L16: Entry 232 of 235

File: USPT

Aug 5, 1997

US-PAT-NO: 5654183

DOCUMENT-IDENTIFIER: US 5654183 A

TITLE: Genetically engineered mammalian neural crest stem cells

DATE-ISSUED: August 5, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; David J.	Altadena	CA		
Stemple; Derek L.	Newton	MA		

US-CL-CURRENT: 435/456; 435/320.1, 435/325, 435/353, 435/368, 435/69.1

ABSTRACT:

The invention includes mammalian multipotent neural stem cells and their progeny and methods for the isolation and clonal propagation of such cells. At the clonal level the stem cells are capable of self regeneration and asymmetrical division. Lineage restriction is demonstrated within developing clones which are sensitive to the local environment. The invention also includes such cells which are transfected with foreign nucleic acid, e.g., to produce an immortalized neural stem cell. The invention further includes transplantation assays which allow for the identification of mammalian multipotent neural stem cells from various tissues and methods for transplanting mammalian neural stem cells and/or neural or glial progenitors into mammals. A novel method for detecting antibodies to neural cell surface markers is disclosed as well as a monoclonal antibody to mouse LNGFR.

17 Claims, 62 Drawing figures

Exemplary Claim Number: 1,4

Number of Drawing Sheets: 23

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KOMC	Draw. Des.
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233. Document ID: US 5653975 A

L16: Entry 233 of 235

File: USPT

Aug 5, 1997

US-PAT-NO: 5653975

DOCUMENT-IDENTIFIER: US 5653975 A

TITLE: Compositions and methods for the delivery of biologically active molecules using cells contained in biocompatible capsules

DATE-ISSUED: August 5, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 424/93.1; 424/93.2, 424/93.21, 424/93.3, 424/93.7

ABSTRACT:

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

9 Claims, 14 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

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234. Document ID: US 5639618 A

L16: Entry 234 of 235

File: USPT

Jun 17, 1997

US-PAT-NO: 5639618

DOCUMENT-IDENTIFIER: US 5639618 A

TITLE: Method of isolating a lineage specific stem cell in vitro

DATE-ISSUED: June 17, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gay; David A.	San Diego	CA		

US-CL-CURRENT: 435/7.21; 435/2, 435/6, 435/7.1, 435/7.2**ABSTRACT:**

The present invention provides a method of isolating a lineage specific stem cell in vitro, comprising a) transfecting a pluripotent embryonic stem cell with a construct comprising a regulatory region of a lineage specific gene operably linked to a DNA encoding a reporter protein, b) culturing the pluripotent embryonic stem cell under conditions such that the pluripotent embryonic stem cell differentiates into a lineage specific stem cell and c) separating the cells which express the reporter protein from the other cells in the culture, the cell which expresses the reporter protein being an isolated lineage specific stem cell. A lineage specific stem cell can also be identified utilizing this method.

9 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KMNC	Drawn Desc
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 235. Document ID: US 5639275 A

L16: Entry 235 of 235

File: USPT

Jun 17, 1997

US-PAT-NO: 5639275

DOCUMENT-IDENTIFIER: US 5639275 A

TITLE: Delivery of biologically active molecules using cells contained in biocompatible immunoisolatory capsules

DATE-ISSUED: June 17, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baetge; Edward E.	Barrington	RI		
Hammang; Joseph P.	Barrington	RI		
Gentile; Frank T.	Warwick	RI		
Lindner; Mark D.	Bristol	RI		
Winn; Shelley R.	Smithfield	RI		
Emerich; Dwaine F.	Providence	RI		

US-CL-CURRENT: 604/891.1; 424/422, 424/424, 424/93.1, 424/93.2, 435/325**ABSTRACT:**

This invention provides improved devices and methods for long-term, stable expression of a biologically active molecule using a biocompatible capsule containing genetically engineered cells for the effective delivery of biologically active molecules to effect or enhance a biological function within a mammalian host. The novel capsules of this invention are biocompatible and are easily retrievable. This invention specifically provides improved methods and compositions which utilize cells transfected with recombinant DNA molecules comprising DNA sequences coding for

biologically active molecules operatively linked to promoters that are not subject to down regulation in vivo upon implantation into a mammalian host. Furthermore, the methods of this invention allow for the long-term, stable and efficacious delivery of biologically active molecules from living cells to specific sites within a given mammal. In addition, this invention provides a general means for maintaining, for extended periods of time, the in vivo expression of transgenes.

6 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

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Terms

Documents

L15 AND neural stem cell

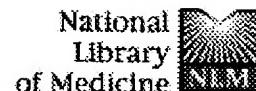
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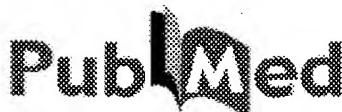
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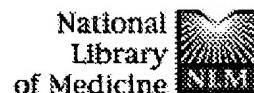
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=> S bFGF OR basic FGF OR FGF-2
21 FILES SEARCHED...
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L1 81486 BFGF OR BASIC FGF OR FGF-2

=> S astrocyte
51 FILES SEARCHED...
L2 173609 ASTROCYTE

=> S L1 AND L2
45 FILES SEARCHED...
L3 4600 L1 AND L2

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L4 2139 DUP REM L3 (2461 DUPLICATES REMOVED)

=> S L4 AND neural stem cell
13 FILES SEARCHED...
17 FILES SEARCHED...
25 FILES SEARCHED...
32 FILES SEARCHED...
46 FILES SEARCHED...
58 FILES SEARCHED...
66 FILES SEARCHED...

L5 355 L4 AND NEURAL STEM CELL

=> S L5 AND neurons
47 FILES SEARCHED...
L6 305 L5 AND NEURONS

=> S L6 AND oligodendrocyte
47 FILES SEARCHED...
L7 251 L6 AND OLIGODENDROCYTE

=> D L6 1-305

L6 ANSWER 1 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN

AN 2004:403225 BIOSIS

DN PREV200400407999

TI Human skin-derived stem cells migrate throughout Forebrain and
differentiate into ***astrocytes*** after injection into adult mouse
brain.

AU Belicchi, Marzia; Pisati, Federica; Lopa, Raffaella; Porretti, Laura;
Fortunato, Francesco; Sironi, Manuela; Scalamogna, Mario; Parati, Eugenio
A.; Bresolin, Nero; Torrente, Yvan [Reprint Author]

CS Dept Neurol SciSystem Cell Lab, Osped Policlin, Via Francesco Sforza 35,
I-20122, Milan, Italy
torrenteyvan@hotmail.com

SO Journal of Neuroscience Research, (August 15 2004) Vol. 77, No. 4, pp.
475-486. print.

ISSN: 0360-4012 (ISSN print).

DT Article

LA English

ED Entered STN: 20 Oct 2004

Last Updated on STN: 20 Oct 2004

L6 ANSWER 2 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on

AN 2004:220484 BIOSIS
DN PREV200400222696
TI Efficient production of ***neural*** ***stem*** ***cells***
and ***neurons*** from embryonic stem cells.
AU Nakayama, Takashi; Momoki-Soga, Tomoko; Yamaguchi, Kazuhiko; Inoue, Nobuo
[Reprint Author]
CS Department of Biochemistry I, Yokohama City University School of Medicine,
Fukuura, Kanazawa-ku, Yokohama, 236-0004, Japan
juninoue@med.yokohama-cu.ac.jp
SO Neuroreport, (1 March 2004) Vol. 15, No. 3, pp. 487-491. print.
ISSN: 0959-4965 (ISSN print).
DT Article
LA English
ED Entered STN: 21 Apr 2004
Last Updated on STN: 21 Apr 2004

L6 ANSWER 3 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2004:202895 BIOSIS
DN PREV200400203438
TI Collagen affects proliferation and neurogenesis in rat neural progenitors.
AU Lin, H. J. [Reprint Author]; O'Shaughnessy, T. J. [Reprint Author]; Kelly,
J. [Reprint Author]; Maric, D.; Chang, Y. H.; Barker, J. L.; Ma, W.
[Reprint Author]
CS Ctr. Biol. Mol. Engin., Naval Res. Lab, Washington, DC, USA
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003)
Vol. 2003, pp. Abstract No. 670.10. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New
Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

L6 ANSWER 4 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2004:201242 BIOSIS
DN PREV200400201800
TI Characterization and dopaminergic differentiation of stem cells derived
from the subventricular zone of the rat brain.
AU Meyer, M. [Reprint Author]; Andersen, R. K. [Reprint Author]; Johansen, M.
[Reprint Author]; Blaabjerg, M. [Reprint Author]; Zimmer, J. [Reprint
Author]
CS Dept. Anat. and Neurobiol, SDU-Odense Univ, Odense C, Denmark
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003)
Vol. 2003, pp. Abstract No. 565.8. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New
Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

L6 ANSWER 5 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2004:201193 BIOSIS
DN PREV200400201751
TI Notch ligands and their role in the proliferation and fate of human neural
progenitor cells.
AU Mori, A. [Reprint Author]; Schwartz, P. H.; Palmer, T. D. [Reprint Author]
CS Dept. Neurosurgery, Stanford Univ, Stanford, CA, USA
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003)
Vol. 2003, pp. Abstract No. 562.9. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New
Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

L6 ANSWER 6 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
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DN PREV200400200050
TI The postnatal cerebellum contains precursors that exhibit characteristics of ***neural*** ***stem*** ***cells***.
AU Carroll, A. L. [Reprint Author]; Kaiser, C. [Reprint Author]; Wechsler-Reya, R. J. [Reprint Author]
CS Pharmacol. and Cancer Biol., Duke Univ. Med. Ctr, Durham, NC, USA
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 454.9. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

L6 ANSWER 7 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AN 2004:159985 BIOSIS
DN PREV200400160135
TI Effect of mitogenic growth factors on proliferation and differentiation of fetal human ***neural*** ***stem*** ***cells***.
AU Tarasenko, Y. I. [Reprint Author]; Wu, P. [Reprint Author]
CS Dept. Anat. and Neurosci, Univ. Texas Med. Br., Galveston, TX, USA
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 28.6. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 24 Mar 2004
Last Updated on STN: 24 Mar 2004

L6 ANSWER 8 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AN 2004:145934 BIOSIS
DN PREV200400145753
TI Establishing conditions for the enrichment of oligodendrocytes from cultures of neurospheres derived from embryonic rat and mouse brains.
AU Louis, S. A. [Reprint Author]; Wagey, R. [Reprint Author]; Thomas, T. E. [Reprint Author]; Eaves, A. C.; Reynolds, B. A. [Reprint Author]
CS Terry Fox Lab., StemCell Technologies Inc, Vancouver, BC, Canada
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 781.6. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 17 Mar 2004
Last Updated on STN: 17 Mar 2004

L6 ANSWER 9 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AN 2003:550738 BIOSIS
DN PREV200300553180
TI Isolation and cultivation of ***neural*** ***stem*** ***cells*** from the embryonic rat brain and spinal cord.
AU Fu Sai-Li; Ma Zheng-Wen; Yin Lan; Lu Pei-hua [Reprint Author]; Xu Xiao-Ming
CS Department of Neurobiology, Shanghai Second Medical University, Shanghai, 200025, China
neuron@shsmu.edu.cn
SO Shengli Xuebao, (June 25 2003) Vol. 55, No. 3, pp. 278-283. print.
CODEN: SLHPAH. ISSN: 0371-0874.
DT Article
LA Chinese
ED Entered STN: 26 Nov 2003
Last Updated on STN: 26 Nov 2003

L6 ANSWER 10 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AN 2003:547159 BIOSIS
DN PREV200300549053

under ***neural*** ***stem*** ***cell*** conditions and exhibits characteristics of radial glial cells.

AU Marchal-Victorion, S.; Deleyrolle, L.; De Weille, J.; Saunier, M.;
CS Dromard, C.; Sandillon, F.; Privat, A.; Hugnot, J. P. [Reprint Author]
INSERM U336, Developpement, Plasticite et Vieillissement du Systeme Nerveux
Central, USTL, Place Eugene Bataillon, 34095, Montpellier Cedex, 5, France
hugnot@univ-montp2.fr

SO Molecular and Cellular Neuroscience, (September 2003) Vol. 24, No. 1, pp.
198-213. print.
ISSN: 1044-7431 (ISSN print).

DT Article
LA English
ED Entered STN: 19 Nov 2003
Last Updated on STN: 19 Nov 2003

L6 ANSWER 11 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2003:491560 BIOSIS
DN PREV200300494544
TI Extrinsic and intrinsic factors governing cell fate in cortical progenitor
cultures.
AU Irvin, Dwain K.; Dhaka, Ajay; Hicks, Carol; Weinmaster, Gerry; Kornblum,
Harley I. [Reprint Author]
CS Crump Institute for Molecular Imaging, 700 Westwood Plaza, Room 1246, Los
Angeles, CA, 90095, USA
hkornblum@mednet.ucla.edu
SO Developmental Neuroscience, (March-August 2003) Vol. 25, No. 2-4, pp.
162-172. print.
CODEN: DENED7. ISSN: 0378-5866.
DT Article
LA English
ED Entered STN: 22 Oct 2003
Last Updated on STN: 22 Oct 2003

L6 ANSWER 12 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2003:326077 BIOSIS
DN PREV200300326077
TI REGION - SPECIFIC GROWTH PROPERTIES OF BRAIN - AND SPINAL CORD - DERIVED
EMBRYONIC ***NEURAL*** ***STEM*** ***CELLS***
AU Fu, S. L. [Reprint Author]; Ma, Z. W. [Reprint Author]; Yin, L. [Reprint
Author]; Iannotti, C.; Hu, Z. Y.; Lu, P. H. [Reprint Author]; Xu, X. M.
[Reprint Author]
CS Neurobiology, Shanghai Second Medical University, Shanghai, China
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002)
Vol. 2002, pp. Abstract No. 726.15. <http://sfn.scholarone.com>. cd-rom.
Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience.
Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 16 Jul 2003
Last Updated on STN: 16 Jul 2003

L6 ANSWER 13 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2003:319111 BIOSIS
DN PREV200300319111
TI The effects of various concentrations of ***FGF*** - ***2*** on the
proliferation and neuronal yield of murine embryonic neural precursor
cells in vitro.
AU Kelly, Claire M.; Zietlow, Rike; Dunnett, Steven B.; Rosser, Anne E.
[Reprint Author]
CS Brain Repair Group, School of Biosciences, Cardiff University, Museum
Avenue, Cardiff, CF10 3US, UK
RosserAE@cf.ac.uk
SO Cell Transplantation, (2003) Vol. 12, No. 3, pp. 215-223. print.
ISSN: 0963-6897.
DT Article
LA English
ED Entered STN: 9 Jul 2003
Last Updated on STN: 9 Jul 2003

L6 ANSWER 14 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
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DN PREV200300305476
TI INSULIN IS A SURVIVAL FACTOR FOR ***NEURAL*** ***STEM***
CELLS
AU Erickson, R. I. [Reprint Author]; Zurcher, S. D. [Reprint Author]; Paucar,
A. A. [Reprint Author]; Kornblum, H. I. [Reprint Author]
CS Pediatrics, Dept of Med and Molec Pharmacol, UCLA, Los Angeles, CA, USA
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002)
Vol. 2002, pp. Abstract No. 532.15. <http://sfn.scholarone.com>. cd-rom.
Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience.
Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 2 Jul 2003
Last Updated on STN: 2 Jul 2003

L6 ANSWER 15 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2003:305442 BIOSIS
DN PREV200300305442
TI GINKGOLIDE B CAN INDUCE ***NEURAL*** ***STEM*** ***CELLS*** TO
DIFFERENTIATE INTO ***NEURONS***
AU Xu, H. [Reprint Author]; Huang, Z. [Reprint Author]; Jin, G. [Reprint
Author]; Huang, S. [Reprint Author]; Zhang, X. [Reprint Author]; Tian, M.
[Reprint Author]; Qin, G. [Reprint Author]
CS Neurobiology and Anatomy, Nantong Medical College, Nantong, Jiangsu, China
SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002)
Vol. 2002, pp. Abstract No. 531.10. <http://sfn.scholarone.com>. cd-rom.
Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience.
Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 2 Jul 2003
Last Updated on STN: 2 Jul 2003

L6 ANSWER 16 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2002:246607 BIOSIS
DN PREV200200246607
TI Alternative sources of ***neurons*** and glia from somatic stem cells.
AU Torrente, Yvan; Belicchi, Marzia; Pisati, Federica; Pagano, Stefano F.;
Fortunato, Francesco; Sironi, Manuela; D'Angelo, Maria Grazia; Parati,
Eugenio A.; Scarlato, Guglielmo; Bresolin, Nereo [Reprint author]
CS Institute of Clinical Neurology, Padiglione Ponti, Ospedale Policlinico,
University of Milan, via Francesco Sforza 35, 20122, Milan, Italy
radponti@unimi.it
SO Cell Transplantation, (2002) Vol. 11, No. 1, pp. 25-34. print.
ISSN: 0963-6897.
DT Article
LA English
ED Entered STN: 17 Apr 2002
Last Updated on STN: 17 Apr 2002

L6 ANSWER 17 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2002:151867 BIOSIS
DN PREV200200151867
TI Identification of a candidate human neurohematopoietic stem-cell
population.
AU Shih, Chu-Chih [Reprint author]; Weng, Yehua [Reprint author]; Mamelak,
Adam; LeBon, Thomas; Forman, Stephen J. [Reprint author]
CS Hematology, BMT, City of Hope National Medical Center, Duarte, CA, USA
SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 2, pp. 125b. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology,
Part 2. Orlando, Florida, USA. December 07-11, 2001. American Society of
Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 21 Feb 2002
Last Updated on STN: 26 Feb 2002

AN STN
2001:562542 BIOSIS
DN PREV200100562542
TI Expression of aromatase cytochrome P450 in differentiating of
neural ***stem*** ***cells*** .
AU Lan, X. [Reprint author]; Li, W. [Reprint author]; Cai, W. Q. [Reprint
author]
CS Department of Histology and Embryology, 3rd Military Medical University,
Chongqing, China
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 1815.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San
Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 5 Dec 2001
Last Updated on STN: 25 Feb 2002

L6 ANSWER 19 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:547809 BIOSIS
DN PREV200100547809
TI Genetic manipulation of ***neural*** ***stem*** ***cells*** to
study the role of polysialylated neural cell adhesion molecule (PSA-NCAM)
in oligodendrocyte development.
AU Franceschini, I. A. [Reprint author]; Casanova, P. [Reprint author];
Fukuda, M.; Dubois-Dalcq, M. [Reprint author]
CS Institut Pasteur, Paris, France
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 1525.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San
Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 21 Nov 2001
Last Updated on STN: 25 Feb 2002

L6 ANSWER 20 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:523535 BIOSIS
DN PREV200100523535
TI Identification of a candidate human neurohematopoietic stem-cell
population.
AU Shih, Chu-Chih [Reprint author]; Weng, Yehua; Mamelak, Adam; LeBon,
Thomas; Hu, Mickey C.-T.; Forman, Stephen J.
CS Division of Hematology/Bone Marrow Transplantation, City of Hope National
M, Beckman Research Institute at the City of Hope, 1500 East Duarte Rd,
Duarte, CA, 91010-3000, USA
cshih@coh.org
SO Blood, (October 15, 2001) Vol. 98, No. 8, pp. 2412-2422. print.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Article
LA English
ED Entered STN: 7 Nov 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 21 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:519847 BIOSIS
DN PREV200100519847
TI Cholinergic phenotype differentiation of FGF-responsive ***neural***
stem ***cells*** in vitro.
AU Shen, J. [Reprint author]; Davis, R.; Wang, M.
CS Department of Neuropharmacology, Scripps Research Institute, La Jolla, CA,
USA
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 940. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San
Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

ED Entered STN: 7 NOV 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 22 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:486865 BIOSIS
DN PREV200100486865
TI Adult CNS ***neural*** ***stem*** ***cell*** numbers are
significantly reduced with age.
AU Shingo, T. [Reprint author]; Weiss, S. [Reprint author]
CS Genes and Development Research Group, Univ Calgary, Calgary, AB, Canada
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 348. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San
Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 17 Oct 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 23 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:486858 BIOSIS
DN PREV200100486858
TI Characterization of adult murine olfactory neuroepithelial progenitors.
AU Klueber, K. M. [Reprint author]; Sedky, K. [Reprint author]; Hatcher, L.
M. [Reprint author]; Lu, C. L. [Reprint author]; Roisen, F. J. [Reprint
author]
CS Anatomical Sciences and Neurobiology School of Medicine, Univ of
Louisville Sch of Med, Louisville, KY, USA
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 347. print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San
Diego, California, USA. November 10-15, 2001.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 17 Oct 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 24 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:467963 BIOSIS
DN PREV200100467963
TI Insulin-like growth factor-I is necessary for ***neural***
stem ***cell*** proliferation and demonstrates distinct
actions of epidermal growth factor and fibroblast growth factor-2.
AU Arsenijevic, Yvan [Reprint author]; Weiss, Samuel; Schneider, Bernard;
Aebischer, Patrick
CS Unit of Oculogenetic, Ophthalmic Hospital Jules Gonin, 15 Av. de France,
1004, Lausanne, Switzerland
Yvan.Arsenijevic@chuv.hospvd.ch
SO Journal of Neuroscience, (September 15, 2001) Vol. 21, No. 18, pp.
7194-7202. print.
CODEN: JNRSDS. ISSN: 0270-6474.
DT Article
LA English
ED Entered STN: 3 Oct 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 25 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:463360 BIOSIS
DN PREV200100463360
TI Differentiation of hippocampal ***neural*** ***stem***
cells : Possible implication of M6a, a CNS neuronal membrane
protein.
AU Mukobata, Shigeki; Urano, Yumiko; Hibino, Toshiyuki; Sugawara, Toshitada;
Sugiyama, Akinori; Tashiro, Fumio [Reprint author]
CS Department of Biological Science and Technology, Faculty of Industrial
Science, Science University of Tokyo, Noda, Chiba, 278-8510, Japan
ftashir@rs.noda.sut.ac.jp
SO Research Communications in Biochemistry and Cell and Molecular Biology,
(2000) Vol. 4, No. 3-4, pp. 221-234. print.

DT Article
LA English

ED Entered STN: 3 Oct 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 26 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:457864 BIOSIS
DN PREV200100457864
TI Developmental expression of fibroblast growth factor (FGF) receptors in
neural ***stem*** ***cell*** progeny. Modulation of
neuronal and glial lineages by ***basic*** ***FGF*** treatment.
AU Reimers, Diana; Lopez-Toledano, Miguel A.; Mason, Ivor; Cuevas, Pedro;
Redondo, Carolina; Herranz, Antonio S.; Lobo, Maria V. T.; Bazan, Eulalia
[Reprint author]
CS Servicio de Neurobiología, Depto de Investigación, Hospital Ramón y Cajal,
Carretera de Colmenar Viejo, km. 9.1, Madrid, 28034, Spain
eulalia.bazan@hrc.es
SO Neurological Research, (September, 2001) Vol. 23, No. 6, pp. 612-621.
print.
CODEN: NRESDZ. ISSN: 0161-6412.

DT Article
LA English
ED Entered STN: 26 Sep 2001
Last Updated on STN: 22 Feb 2002

L6 ANSWER 27 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:97221 BIOSIS
DN PREV200100097221
TI Ex vivo differentiation of mesenchymal stem cells into oligodendrocytes,
astrocytes, and/or dopaminergic, gamma-amino-butyric-acid-ergic
serotonergic ***neurons***.
AU Reyes, M. [Reprint author]; Keene, C. D.; Low, W. C.; Verfaillie, C. M.
CS University of Minnesota Medical School, Minneapolis, MN, USA
SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract
No.-415.15. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New
Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 21 Feb 2001
Last Updated on STN: 15 Feb 2002

L6 ANSWER 28 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:88278 BIOSIS
DN PREV200100088278
TI Transplantation of human ***neural*** ***stem*** ***cells***
into injured adult spinal cord.
AU He, Y. [Reprint author]; Fischer, I.; Park, K. I.; Snyder, E. Y.; Tessler,
A.
CS MCP Hahnemann, Philadelphia, PA, USA
SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract
No.-327.2. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New
Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience.
ISSN: 0190-5295.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 14 Feb 2001
Last Updated on STN: 12 Feb 2002

L6 ANSWER 29 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2001:88076 BIOSIS
DN PREV200100088076
TI Robust induction of tyrosine hydroxylase in embryonic and adult striatal
neural ***stem*** ***cell*** -derived ***neurons*** in
defined media and the absence of gene transfer.
AU Shingo, T. [Reprint author]; Weiss, S.
CS University of Calgary, Faculty of Medicine, Calgary, AB, Canada

NO.-312.18. print.

Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience. ISSN: 0190-5295.

DT Conference; (Meeting)

LA Conference; Abstract; (Meeting Abstract)

English

ED Entered STN: 14 Feb 2001

Last Updated on STN: 12 Feb 2002

L6 ANSWER 30 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 2001:88072 BIOSIS

DN PREV200100088072

TI Direct flow cytometric isolation of ***neural*** ***stem*** ***cells*** and progenitors from the embryonic rat telencephalon: differential effects of ***bFGF*** and EGF on self-renewal and commitment to ***neurons*** and glia.

AU Maric, D. [Reprint author]; Maric, I.; Chang, Y. H.; Barker, J. L.

CS NINDS, NIH, Bethesda, MD, USA

SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-312.14. print.

Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience.

ISSN: 0190-5295.

DT Conference; (Meeting)

LA Conference; Abstract; (Meeting Abstract)

English

ED Entered STN: 14 Feb 2001

Last Updated on STN: 12 Feb 2002

L6 ANSWER 31 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 2001:88068 BIOSIS

DN PREV200100088068

TI Skin tissue: a source for multipotent ***neural*** ***stem*** ***cells***.

AU Toma, J. G. [Reprint author]; Akhavan, M.; Fernandes, K.; Fortier, M.; Sadikot, A.; Miller, F. D.

CS Montreal Neurological Institute, Center for Neuronal Survival, McGill University, Montreal, QC, Canada

SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-312.10. print.

Meeting Info.: 30th Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 04-09, 2000. Society for Neuroscience.

ISSN: 0190-5295.

DT Conference; (Meeting)

LA Conference; Abstract; (Meeting Abstract)

English

ED Entered STN: 14 Feb 2001

Last Updated on STN: 12 Feb 2002

L6 ANSWER 32 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 2000:173206 BIOSIS

DN PREV200000173206

TI Establishment and properties of a growth factor-dependent, perpetual ***neural*** ***stem*** ***cell*** line from the human CNS.

AU Villa, Ana; Snyder, Evan Y.; Vescovi, Angelo; Martinez-Serrano, Alberto [Reprint author]

CS Center of Molecular Biology Severo Ochoa, Laboratory CX-450, Autonomous University of Madrid, Campus Cantoblanco, 28049, Madrid, Spain

SO Experimental Neurology, (Jan., 2000) Vol. 161, No. 1, pp. 67-84. print.

CODEN: EXNEAC. ISSN: 0014-4886.

DT Article

LA English

ED Entered STN: 3 May 2000

Last Updated on STN: 4 Jan 2002

L6 ANSWER 33 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 1999:130385 BIOSIS

DN PREV199900130385

TI Expression of EGF receptor and FGF receptor isoforms during neuroepithelial stem cell differentiation.

CS Department Neurobiology and Anatomy, University Utah Medical School, 50
North Medical Drive, Salt Lake City, UT 84132, USA
SO Journal of Neurobiology, (Feb. 5, 1999) Vol. 38, No. 2, pp. 207-224.
print.
CODEN: JNEUBZ. ISSN: 0022-3034.

DT Article
LA English
ED Entered STN: 17 Mar 1999
Last Updated on STN: 17 Mar 1999

L6 ANSWER 34 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 1999:13363 BIOSIS
DN PREV199900013363
TI Regulation of ***neural*** ***stem*** ***cell***
differentiation in the forebrain.
AU Bartlett, Perry [Reprint author]; Brooker, Gordon J.; Faux, Clare H.;
Dutton, Renee; Murphy, Mark; Turnley, Ann; Kilpatrick, Trevor J.
CS Neurobiol. Group, Walter and Eliza Hall Inst. Med. Res., Parkville, VIC
3050, Australia
SO Immunology and Cell Biology, (Oct., 1998) Vol. 76, No. 5, pp. 414-418.
print.
CODEN: ICBIEZ. ISSN: 0818-9641.

DT Article
LA English
ED Entered STN: 11 Jan 1999
Last Updated on STN: 11 Jan 1999

L6 ANSWER 35 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 1998:407917 BIOSIS
DN PREV199800407917
TI Heparin, but not other proteoglycans potentiates the mitogenic effects of
FGF - ***2*** on mesencephalic precursor cells.
AU Caldwell, Maeve A. [Reprint author]; Svendsen, Clive N.
CS MRC Cambridge Centre Brain Repair, Cambridge Univ. Forvie Site, Robinson
Way, Cambridge CB2 2PY, UK
SO Experimental Neurology, (July, 1998) Vol. 152, No. 1, pp. 1-10. print.
CODEN: EXNEAC. ISSN: 0014-4886.
DT Article
LA English
ED Entered STN: 21 Sep 1998
Last Updated on STN: 21 Sep 1998

L6 ANSWER 36 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 1998:311971 BIOSIS
DN PREV199800311971
TI ***Basic*** ***FGF*** -responsive telencephalic precursor cells
express functional GABA_A receptor/C_l- channels in vitro.
AU Ma, Wu [Reprint author]; Liu, Qi-Ying; Maric, Dragan; Sathanoori, Ramasri;
Chang, Yoong-Hee; Barker, Jeffery L.
CS Lab. Neurophysiol., NINDS-NIH, Build. 36, Room 2C-02, Bethesda, MD 20892,
USA
SO Journal of Neurobiology, (June 5, 1998) Vol. 35, No. 3, pp. 277-286.
print.
CODEN: JNEUBZ. ISSN: 0022-3034.

DT Article
LA English
ED Entered STN: 15 Jul 1998
Last Updated on STN: 15 Jul 1998

L6 ANSWER 37 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 1997:458386 BIOSIS
DN PREV199799757589
TI Multipotent CNS stem cells are present in the adult mammalian spinal cord
and ventricular neuroaxis.
AU Weiss, Samuel [Reprint author]; Dunne, Christine; Hewson, Jennifer; Wohl,
Cheryl; Wheatley, Matt; Peterson, Alan C.; Reynolds, Brent A.
CS Dep. Anatomy, Univ. Calgary Fac. Med., 3330 Hospital Dr. NW, Calgary, AB
T2N 4N1, Canada
SO Journal of Neuroscience, (1996) Vol. 16, No. 23, pp. 7599-7609.
CODEN: JNRSDS. ISSN: 0270-6474.
DT Article

ED Entered STN: 27 Oct 1997
Last Updated on STN: 27 Oct 1997

L6 ANSWER 38 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 1997:246304 BIOSIS
DN PREV199799545507

TI The adult rat hippocampus contains primordial ***neural***
stem ***cells***.

AU Palmer, Theo D.; Takahashi, Jun; Gage, Fred H.
CS Lab. Genetics, Salk Inst. Biological Studies, 10010 North Torrey Pines Rd., La Jolla, CA 92037, USA
SO Molecular and Cellular Neuroscience, (1997) Vol. 8, No. 6, pp. 389-404.
CODEN: MOCNED. ISSN: 1044-7431.

DT Article
LA English
ED Entered STN: 13 Jun 1997
Last Updated on STN: 13 Jun 1997

L6 ANSWER 39 OF 305 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 1995:311207 BIOSIS
DN PREV199598325507

TI Establishment and Characterization of a Multipotential Neural Cell Line That Can Conditionally Generate ***Neurons***, ***Astrocytes***, and Oligodendrocytes In Vitro.

AU Nakafuku, M. [Reprint author]; Nakamura, S.
CS Dep. Biochem. Cell. Biol., Natl. Inst. Neurosci., Natl. Cent. Neurol. Psychiatr., 4-1-1, Ogawahigashi, Kodaira, Tokyo 187, Japan
SO Journal of Neuroscience Research, (1995) Vol. 41, No. 2, pp. 153-168.
CODEN: JNREDK. ISSN: 0360-4012.

DT Article
LA English
ED Entered STN: 30 Jul 1995
Last Updated on STN: 30 Jul 1995

L6 ANSWER 40 OF 305 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN 2004-12838 BIOTECHDS

AN

TI Promoting dopaminergic neuronal development by enhancing proliferation in a neural cell expressing Nurr1, useful in treating neurodegenerative diseases, such as Parkinson's disease, a Parkinsonian syndrome or neuronal loss;
dopaminergic neuronal and engineered cell for use in disease therapy

AU ARENAS E; WAGNER J; BRANCO G C; SOUSA K
PA NEURO THERAPEUTICS AB
PI WO 2004029229 8 Apr 2004
AI WO 2003-IB4598 24 Sep 2003
PRAI US 2003-494595 12 Aug 2003; GB 2002-22162 24 Sep 2002
DT Patent
LA English
OS WPI: 2004-316111 [29]

L6 ANSWER 41 OF 305 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN 2003-27018 BIOTECHDS

AN

TI Generating human nervous system cells, tissues or ***neural***
stem ***cell*** progenitors from hematopoietic stem cells, useful for preventing or treating nervous system injuries or neurodegenerative diseases (e.g. Alzheimer's disease);
stem cell culture and enrichment for disease cell therapy

AU PIECHACZEK C; BETHKE U; WIDER A; SCHMITZ J
PA MILTENYI BIOTEC GMBH
PI WO 2003078610 25 Sep 2003
AI WO 2002-EP3097 20 Mar 2002
PRAI WO 2002-3097 20 Mar 2002; WO 2002-3097 20 Mar 2002
DT Patent
LA English
OS WPI: 2003-767520 [72]

L6 ANSWER 42 OF 305 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN 2003-08710 BIOTECHDS

AN

TI Generating neuronal cell such as dopaminergic or serotonergic neuron, by culturing nuclear transfer embryonic stem (ES) cell to form embryoid body (EB) which is treated with growth factors and mitogen, and then removing mitogen;
stem cell culture for neuron generation for use in tissue engineering

PA SLOAN KETTERING INST CANCER RES; UNIV ROCKEFELLER
PI WO 2002086073 31 Oct 2002
AI WO 2002-US12559 22 Apr 2002
PRAI US 2001-285654 20 Apr 2001; US 2001-285654 20 Apr 2001
DT Patent
LA English
OS WPI: 2003-129113 [12]

L6 ANSWER 43 OF 305 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
AN 2003-08187 BIOTECHDS
TI Producing progeny of a neural progenitor cell useful for treating a disease associated with neuron or oligodendrocyte loss or dysfunction, e.g., Alzheimer's disease, comprises culturing brain tissue with platelet derived growth factor;
drug screening and tissue engineering for Alzheimer disease, Parkinson disease and stroke therapy

AU WEISS S; CHOJNACKI A K
PA STEM CELL THERAPEUTICS INC
PI WO 2002088330 7 Nov 2002
AI WO 2002-CA587 26 Apr 2002
PRAI US 2001-307070 20 Jul 2001; US 2001-287214 27 Apr 2001
DT Patent
LA English
OS WPI: 2003-111882 [10]

L6 ANSWER 44 OF 305 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
AN 2002-11748 BIOTECHDS
TI Inducing in vivo migration of progenitor cells transplanted to brain for treating brain damage comprises transplanting cells to first locus and infusing mitogenic growth factor at second locus;
stem cell culture on new serum-free culture medium, useful for therapy, diagnosis, drug screening, genomics and drug delivery

AU FRICKER R A
PA STEM CELLS INC
PI WO 2001028574 26 Apr 2001
AI WO 1999-US41365 20 Oct 1999
PRAI US 1999-160553 20 Oct 1999
DT Patent
LA English
OS WPI: 2002-239389 [29]

L6 ANSWER 45 OF 305 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
AN 2002-06780 BIOTECHDS
TI In vitro transdifferentiation of mammalian cells from glial cell type to ***neurons***, oligodendrocytes and ***astrocytes***, comprises culturing the cells to form group of cells and exposing the cells to a growth factor;
human fetal and adult mammal ***astrocyte*** and stem cell transactivation in a culture vessel for the production of multipotent cell for xenotransplantation, Alzheimer disease, Parkinson disease, stroke recovery, brain, spinalcord damage therapy

AU SALIN-NORDSTROM T H
PA SPINAL CORD SOC
PI WO 2001095861 20 Dec 2001
AI WO 2000-US40971 16 Jun 2000
PRAI US 2000-644498 23 Aug 2000
DT Patent
LA English
OS WPI: 2002-139690 [18]

L6 ANSWER 46 OF 305 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
AN 1996:27175034 BIOTECHNO
TI The adult rat hippocampus contains primordial ***neural*** ***stem*** ***cells***
AU Palmer T.D.; Takahashi J.; Gage F.H.
CS T.D. Palmer, Laboratory of Genetics, Salk Institute for Biolog. Studies, 10010 North Torrey Pines Road, San Diego, CA 92037, United States.
SO Molecular and Cellular Neurosciences, (1996), 8/6 (389-404), 92 reference(s)
DT CODEN: MOCNED ISSN: 1044-7431
CY Journal; Article
LA United States
SL English
SL English

AN 2004:968794 CAPLUS
TI Isolation and culture of rat fetal ***neural*** ***stem***
cells
AU Li, Xue-ling; Hu, Ting-mao; Su, Hui-min; Chen, Ming-jie; Yu, Hai-quan;
Morrison, John R.
CS Research Center for Laboratory Animal Science, The Key Laboratory for
Mammalian Reproductive Biology and Biotechnology, Ministry for Education,
NeiMongol University, Hohhot, 010021, Peop. Rep. China
SO Neimenggu Daxue Xuebao, Ziran Kexueban (2004), 35(5), 540-545
CODEN: NDZKEJ; ISSN: 1000-1638
PB Neimenggu Daxue Xuebao Bianjibu
DT Journal
LA Chinese

L6 ANSWER 48 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:961588 CAPLUS
TI Culture and differentiation of olfactory ***neural*** ***stem***
cells from embryonic rat
AU Chen, Fuquan; Wang, Jinling; Qiu, Jianhua; Liu, Shunli; Mi, Wenjuan
CS Department of Otolaryngology, Xijing Hospital, Fourth Military Medical
University, Xi'an, 710032, Peop. Rep. China
SO Zhonghua Shenjing Waike Jibing Yanjiu Zazhi (2004), 3(4), 344-347
CODEN: ZSWJAU; ISSN: 1671-2897
PB Disi Junyi Daxue Diyifushu Yiyuan
DT Journal
LA Chinese

L6 ANSWER 49 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:776913 CAPLUS
DN 141:393295
TI Embryonic cerebral cortex cells retain CNS phenotypes after
transplantation into peripheral nerve
AU Baez, Juan Carlos; Gajavelli, Shyam; Thomas, Christine K.; Grumbles,
Robert M.; Aparicio, Beatriz; Byer, David; Tsoulfas, Pantelis
CS The Miami Project to Cure Paralysis, Department of Neurological Surgery,
University of Miami School of Medicine, Miami, FL, 33136, USA
SO Experimental Neurology (2004), 189(2), 422-425
CODEN: EXNEAC; ISSN: 0014-4886
PB Elsevier
DT Journal
LA English

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 50 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:214072 CAPLUS
DN 140:284982
TI Efficient expansion and gene transduction of mouse neural stem/progenitor
cells on recombinant fibronectin
AU Rappa, G.; Kunke, D.; Holter, J.; Diep, D. B.; Meyer, J.; Baum, C.;
Fodstad, O.; Krauss, S.; Lorico, A.
CS Department of Tumor Biology, Norwegian Radium Hospital, Montebello, Oslo,
0310, Norway
SO Neuroscience (Oxford, United Kingdom) (2004), 124(4), 823-830
CODEN: NRSCDN; ISSN: 0306-4522
PB Elsevier Science Ltd.
DT Journal
LA English

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 51 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:186248 CAPLUS
DN 140:369016
TI The effects of GM1 and ***bFGF*** synergistically inducing adult rat
bone marrow stromal cells to form neural progenitor cells and their
differentiation
AU Zhang, Hui; Wang, Ji-zuo; Sun, Hong-yu; Zhang, Jian-ning; Yang, Shu-yuan
CS Tianjin Huanhu Hospital, Tianjin, 300060, Peop. Rep. China
SO Chinese Journal of Traumatology (English Edition) (2004), 7(1), 3-6
CODEN: CJTRFY; ISSN: 1008-1275
PB Chinese Journal of Traumatology (English Edition)
DT Journal
LA English

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

L6 ANSWER 52 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:973646 CAPLUS
DN 140:264804
TI Effects of T3 on differentiation of human ***neural*** ***stem***
cells to oligodendrocyte
AU Liu, Ben; Li, Lanying; Liu, Chunrong; Pang, Zhiling
CS Institute of Endocrinology, Tianjin Medical University, Tianjin, 300070,
Peop. Rep. China
SO Jiepou Xuebao (2003), 34(2), 213-216
CODEN: CPHPA5; ISSN: 0529-1356
PB Jiepou Xuebao Bianji Weiyuanhui
DT Journal
LA Chinese

L6 ANSWER 53 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:792798 CAPLUS
DN 140:71380
TI In vitro induced dopaminergic differentiation of expanded rat
mesencephalic ***neural*** ***stem*** ***cell***
AU Zheng, Min; Wang, Dongmei; Jiao, Wenchang; Li, Haiming; Zhao, Lianxu; Bai,
Chixian; Wang, Yaping; Pei, Xuetao
CS Lab of Stem Cell Biology, Beijing Institute of Transfusion Medicine,
Beijing, 100850, Peop. Rep. China
SO Chinese Science Bulletin (2003), 48(16), 1759-1763
CODEN: CSBUEF; ISSN: 1001-6538
PB Science in China Press
DT Journal
LA English

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 54 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:463607 CAPLUS
DN 139:208169
TI Effect of cytokines on proliferation and differentiation of ***neural***
stem ***cells***
AU Zhang, Wenzhi; Su, Xin; Qin, Jinxi; Kong, Fanming; Kong, Jianguo; Wang,
Xinping; Zhi, Dashi
CS Department of Pathology, Tianjin Huanhu Hospital, Tianjin, 300060, Peop.
Rep. China
SO Linchuang Yu Shiyan Binglixue Zazhi (2003), 19(1), 77-81
CODEN: LYSBAA; ISSN: 1001-7399
PB Linchuang Yu Shiyan Binglixue Zazhi Bianjibu
DT Journal
LA Chinese

L6 ANSWER 55 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:415114 CAPLUS
DN 139:191763
TI Sonic hedgehog and FGF8 collaborate to induce dopaminergic phenotypes in
the Nurr1-overexpressing ***neural*** ***stem*** ***cell***
AU Kim, Tae Eun; Lee, Hack Sup; Lee, Yong Beom; Hong, Seung Hwan; Lee, Young
Seek; Ichinose, Hiroshi; Kim, Seung U.; Lee, Myung Ae
CS Brain Disease Research Center, Ajou University School of Medicine, Suwon,
442-749, S. Korea
SO Biochemical and Biophysical Research Communications (2003), 305(4),
1040-1048
CODEN: BBRCA9; ISSN: 0006-291X
PB Elsevier Science
DT Journal
LA English

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 56 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:123560 CAPLUS
DN 138:167112
TI Regulatory mechanism of differentiation of nerve stem cells
AU Matsumoto, Arifumi; Okano, Hideyuki
CS Sch. Med., Keio Univ., Japan
SO Farumashia (2003), 39(2), 108-112
CODEN: FARUAW; ISSN: 0014-8601
PB Pharmaceutical Society of Japan
DT Journal; General Review

L6 ANSWER 57 OF 305 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:974223 CAPLUS

DN 138:35754

TI Cultures of human CNS ***neural*** ***stem*** ***cells***
their proliferation and derived cell lines useful in cell therapies of CNS
disorders

IN Carpenter, Melissa

PA Cytotherapeutics, Inc., USA

SO U.S., 15 pp., Cont.-in-part of U.S. 5,968,829.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6498018	B1	20021224	US 2000-486302	20001016
	US 5968829	A	19991019	US 1997-926313	19970905
	WO 9911758	A2	19990311	WO 1998-US18597	19980904
	WO 9911758	A3	19990527		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002164309	A1	20021107	US 2002-134234	20020429
	US 6777233	B2	20040817		
	US 2003166276	A1	20030904	US 2002-328644	20021223
PRAI	US 1997-926313	A2	19970905		
	WO 1998-US18597	W	19980904		
	US 2000-486302	A1	20001016		

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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DN 138:284298

TI Mechanisms regulating lineage diversity during mammalian cerebral cortical
neurogenesis and gliogenesis

AU Mehlert, Mark F.

CS F.M. Kirby Program in Neural Protection and Repair, Departments of
Neurology, Neuroscience and Psychiatry, Rose F. Kennedy Center for
Research in Mental Retardation and Developmental Disabilities, Einstein
Comprehensive Cancer Center, Albert Einstein College of Medicine, Bronx,
NY, 10461, USA

SO Results and Problems in Cell Differentiation (2002), 39(Cortical
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PB Springer-Verlag

DT Journal; General Review

LA English

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AU Wu, Yi-min; Yu, Hong; Lin, Li-zhu; He, Yi-feng; Zhao, Shou-yuan; Li,
Chang-ben

CS Institute of Genetics, School of Life Sciences, Fudan University,
Shanghai, 200433, Peop. Rep. China

SO Fudan Xuebao, Ziran Kexueban (2002), 41(1), 57-62

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LA Chinese

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AU Liu, Hui; Yang, Shuyuan; Gao, Yongzhong; Zhang, Jianning; Zhang, Wenzhi
CS Department of Neurosurgery, General Hospital, Tianjin Medical University,
Tianjin, 300052, Peop. Rep. China
SO Zhongguo Shenjing Jingshen Jibing Zazhi (2001), 27(4), 273-275
CODEN: ZSJZEH; ISSN: 1002-0152
PB Zhongzhan Yike Daxue Qikan Zhongxin
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LA Chinese

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TI Oligodendrocyte precursor cells reprogrammed to become multipotential CNS stem cells
AU Kondo, Toru; Raff, Martin
CS Medical Research Council Developmental Neurobiology Programme, MRC Laboratory for Molecular Cell Biology and the Biology Department, University College London, London, WC1E 6BT, UK
SO Science (Washington, D. C.) (2000), 289(5485), 1754-1757
CODEN: SCIEAS; ISSN: 0036-8075
PB American Association for the Advancement of Science
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AN 2000:186724 CAPLUS
DN 132:219220
TI In vitro generation of differentiated ***neurons*** from cultures of mammalian multipotential CNS stem cells using growth factor
IN Johe, Karl K.
PA NeuralStem Biopharmaceuticals, Ltd., USA
SO U.S., 43 pp., Cont.-in-part of U.S. 5,753,506.
CODEN: USXXAM
DT Patent
LA English

FAN.CNT 4

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
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AN 1999:796263 CAPLUS
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AU Takahashi, Jun
CS Dep. of Neurosurg., Kyoto Univ. Grad. Sch. of Med., Japan
SO Saishin Igaku (1999), 54(12), 2828-2835
CODEN: SAIGAK; ISSN: 0370-8241
PB Saishin Igakusha
DT Journal; General Review
LA Japanese

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Differentiation of hippocampal ***neural*** ***stem***
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protein.

AU Mukobata S.; Urano Y.; Hibino T.; Sugawara T.; Sugiyama A.; Tashiro F.
CS F. Tashiro, Dept. of Biol. Sci. and Technol., Faculty of Industrial
Science, Science University of Tokyo, Noda, Chiba 278-8510, Japan.
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SO Research Communications in Biochemistry and Cell and Molecular Biology,
(2001) 4/3-4 (221-234).
Refs: 33
ISSN: 1087-111X CODEN: RCBBFC

CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
029 Clinical Biochemistry

LA English
SL English

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AN 2002110811 ESBIOBASE
TI The potential for circuit reconstruction by expanded neural precursor
cells explored through porcine xenografts in a rat model of Parkinson's
disease

AU Armstrong R.J.E.; Hurelbrink C.B.; Tyers P.; Ratcliffe E.L.; Richards A.;
Dunnett S.B.; Rosser A.E.; Barker R.A.
CS R.A. Barker, Cambridge Centre for Brain Repair, University of Cambridge,
Forvie Site, Robinson Way, Cambridge CB2 2PY, United Kingdom.
SO Experimental Neurology, (2002), 175/1 (98-111), 80 reference(s)
CODEN: EXNEAC ISSN: 0014-4886

DT Journal; Article
CY United States
LA English
SL English

L6 ANSWER 66 OF 305 FEDRIP COPYRIGHT 2004 NTIS on STN
AN 2004:83581 FEDRIP
NR VA 152654
NC 0001, 695
TI Induced Neural Cell Dedifferentiation as an Alternative to ***Neural***
Stem ***Cell*** Transplants
SF Principal Investigator: Alexanian, Arshak R., Ph.D., V.M.D.
CSP Department of Veterans Affairs, Medical Center, Milwaukee, WI
CSS Supported By: Department of Veterans Affairs. Research and Development
(15), 810 Vermont Ave. N.W., Washington, D.C., 20420, United States of
America
DB Mar 12, 2003
FS Department of Veterans Affairs

L6 ANSWER 67 OF 305 FEDRIP COPYRIGHT 2004 NTIS on STN
AN 2004:56202 FEDRIP
NR VA 138703
NC 0021, 509
TI Human Marrow Stromal Cells as a Source of ***Neurons***
SF Principal Investigator: Hess, David C., M.D.
CSP Department of Veterans Affairs, Medical Center, Augusta, GA
CSS Supported By: Department of Veterans Affairs. Research and Development
(15), 810 Vermont Ave. N.W., Washington, D.C., 20420, United States of
America
DB Dec 15, 2000
FS Department of Veterans Affairs

L6 ANSWER 68 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10707084 IFIPAT;IFIUDB;IFICDB
TI ENGRAFTABLE HUMAN ***NEURAL*** ***STEM*** ***CELLS***
IN Evan Snyder Y; Kim Seung U (CA); Wolfe John H
PA British Columbia, University of CA
Children's Medical Center Corp The
Pennsylvania, University of
(10709, 11738, 64664)
PI US 2004214332 A1 20041028
AI US 2003-736713 20031215

FI US 1999-398299
US 2004214332
US 5958767
US 6680198

DT Utility; Patent Application - First Publication
FS CHEMICAL
CLMN APPLICATION
GI 3

19990920 CONTINUATION
20041028

6680198

7 Figure(s).

FIG. 1: The monoclonal nature of each putative human ***neural*** ***stem*** ***cell*** (NSC) clone is confirmed by demonstrating a single retroviral insertion site within the genomes of each. (A) Genomic DNA from the putative human NSC clone H1 (which was propagated in ***bFGF*** and subsequently transduced with a retrovirus encoding lacZ and neo) was digested with Hind III (which cuts only once within the provirus) and incubated with a radiolabeled nucleotide probe complementary to neo. Monoclonal derivation is confirmed by the presence of a single integrated retrovirus with an integration site common to all cells in the colony indicating that they were derived from a single infected "parent" cell (arrow). As a positive control, the murine NSC clone C17.2 which contains 2 integrated retroviruses encoding neo (one from an integrated vmyc-encoding retrovirus and one from a separate lacZ-encoding retrovirus^{13,28}) appropriately shows 2 bands (arrows). Specificity of the probe is demonstrated by the negative control, the human meduloblastoma cell line DaOY, which, having not been infected with a retrovirus, shows no neo sequences in its genome and hence no hybridization product. (B) Genomic DNA from putative clones H9, H6, D10, and C2 (human NSC colonies propagated in ***bFGF*** and/or EGF and then subsequently infected with a retrovirus encoding the propagating gene vmyc) were digested with Bgl II or Bam HI (each of which cuts only once within the provirus) and then subjected to Southern analysis utilizing a probe complementary to the proviral vmyc. Single retroviral integration sites are appreciated in all colonies confirming the monoclonal nature of each putative clone. The murine NSC clone C17.2, which contains a single copy of vmyc 13,28 and serves as a positive control, also has one band. As in (A), the negative control non-virally infected human DaOY cells, have no bands.

FIG. 2: Characterization of human ***neural*** ***stem*** ***cells*** (NSCs) in vitro. (A) NSCs tend to grow as clusters in serum-free bFGF-supplemented medium. They differentiate spontaneously into neurofilament-immunoreactive ***neurons*** (B) or CNPaseimmunoreactive oligodendrocytes (C) when transferred to serum-containing medium, or into GFAP-expressing ***astrocytes*** when cocultured with primary murine CNS cultures (and identified with a human-specific anti-GFAP antibodies, for example in (D), illustrating a

FIG. 3: Human ***neural*** ***stem*** ***cells*** (NSCs) are capable of complementing a prototypical gene product deficiency (e.g., beta-hexosaminidase-A) in neural cells of multiple lineages in which the gene is mutated (e.g., brain cells from Tay-Sachs mice). As a proof of principle that human NSCs (like murine NSCs) are capable of cross-correcting a neurogenetic defect, neural cells from the brains of mice with the prototypical neurogenetic disorder Tay-Sachs disease, generated via targeted mutagenesis of the alpha-subunit of beta-hexosaminidase resulting in absence of hexosaminidase-A39, were exposed to secreted gene products from human NSCs to assess their ability to effect complementation of the defect. (A-C) Hexosaminidase activity as determined by NASBG histochemistry (Nomarski optics). Functional hexosaminidase produces a red-pink precipitate with an intensity proportional to the level of activity. (A) Tay-Sachs neural cells (arrows) not exposed to NSCs have no, or minimal, detectable hexosaminidase. (A small number of faintly pink NASBG+ cells are occasionally observed reflecting low residual hexosaminidase-B activity). In comparison, Tay-Sachs neural cells exposed to secretory products from murine NSCs (e.g., clone C17.2H) (B) or from human NSCs (C) now stain intensely red (wildtype intensity) suggesting that they have been cross-corrected, i.e., have internalized significant amounts of functionally active hexosaminidase from the NSC-conditioned medium. (D-L) To help determine which neural cell types from the Tay-Sachs brain were cross-corrected, primary dissociated Tay-Sachs neural cells which had been co-cultured in a transwell system with human NSCs (as in (C)) were reacted both with a fluorescein-labeled antibody to the human alphasubunit of hexosaminidase (D-F) and with antibodies to neural cell type-specific antigens (visualized by a TR-tagged secondary antibody) (G-I, respectively). Photomicroscopy through a dual filter confirmed co-localization of the alphasubunit with the cell-type markers (J-L),

cells (D) were ***neurons***, as indicated by the expression of the neuronal marker N

FIG. 4: Developmentally-appropriate migration of human ***neural*** ***stem*** ***cells*** (NSCs) following engraftment into the subventricular germinal zone (SVZ) of newborn mice. (A,B) Donor-derived human NSCs integrate and intermingle nondisruptively with endogenous progenitors within the host SVZ by 24 hours after transplantation. A representative donor-derived cell with a typical short process (r FIG. 5. Scale Bars: 100 mu m.

FIG. 5: Differentiation and disseminated foreign gene (betagalactosidase) expression of human ***neural*** ***stem*** ***cell*** (NSC) clones in vivo following engraftment into the SVZ of developing, neonatal mice. (A-C) Stably engrafted, beta-galactosidase (beta gal)-expressing, donor-derived cells from representative human NSC clone H1, detected with Xgal histochemistry (A,B) and with anti-beta gal ICC (C). The donor-derived cells pictured in the series of photomicrographs in (A) are within the periventricular and subcortical white matter regions (as per FIG. 4). (The top and bottom panels low power on the left, corresponding high power on the right are from representative semi-adjacent regions within a single recipient, suggesting a significant distribution of cells; arrows indicate the lateral ventricles). Furthermore, as illustrated in (B,C) by representative high power photomicrographs through the olfactory bulb (OB) (located as in FIG. 4D), donor-derived cells from this clone have not only migrated extensively to this developmentally-appropriate site, but continue to express beta gal in this distant location (i.e., in a disseminated fashion in vivo). The normal fate of a subpopulation of SVZderived progenitors that have migrated to the OB at this developmental stage is to become neuronal. In (D-G), donor-derived ***neurons*** in the mature OB, derived from BrdU-labeled NSCs (representative clone H6) implanted into the SVZ at birth, are identified by both their immunoreactivity to a human-specific NF antibody (D) as well as their expression of the mature neuronal marker, NeuN (E-G); under confocal microscopy, a BrdU+ (hence, donor-derived) cell (arrow in (E), fluorescein) is NeuN+ (arrow in (F), Texas Red) appreciated best with a dual filter (arrow in (G)). Adjacent to this representative donor-derived BrdU+/NeuN+ neuron (arrow), are 2 host OB ***neurons*** (BrdU/NeuN+ in (G)) which share a similar size, morphology, and location with the donor-derived cell (arrow in F). (H,I) High power view of a representative donor-derived (clone H6) oligodendrocyte (arrow), appropriately in the adult subcortical white matter (as per FIG. 4C) following neonatal intraventricular implantation, double-labeled with an antibody to the oligodendrocyte-specific protein CNPase (H) and BrdU (I). Characteristic cytoplasmic processes extending from the soma are noted (arrowhead in (H)). (The morphology of the CNPase+ cell has been somewhat damaged by the HCl pre-treatment required for BrdU double-labeling). (J) Mature donor-derived ***astrocytes*** (clone H6) in the adult subcortical white matter (arrow) (as per FIG. 4C) and striatum following neonatal intraventricular implantation, identified with a human-specific anti-GFAP antibody. The inset better illustrates at higher magnification the characteristic mature astrocytic morphology of a representative human-GFAP+ cell. (K-Q) Expression of vmyc is downregulated within 48 hours following engraftment. (K), (M), and (O) are DAPI-based nuclear stains of the adjacent panels (L), (N), and (P, Q), respectively. Representative human NSC clone H6 was generated (as was the well-characterized murine NSC clone C17.2) with the propagating gene vmyc. vmyc immunoreactivity in H6-derived cells (red) in the SVZ (arrows) at 24 hours following engraftment ((L) and at higher power in (N)), is persistently absent (P) in integrated H6-derived cells (visualized by BrdU labeling in (Q) (shown here 3 weeks following transplantation, but representative of any point 24 hours after engraftment). Scale Bars: (A), (K) and applies to (L): 100 mu m; (D), (E) and applies to (F,G), (H) and applies to (I), (J), (M) and applies to (N): 10 mu m; (O) and applies to (P,Q): 50 mu m

FIG. 6: Neuronal Replacement by human neural stemcells (NSCs) following transplantation into the cerebellum of the granule neuron-deficient meander tail (mea) mouse model of neurodegeneration. (A-G) BrdU-intercalated, donor-derived cells (from representative clone H6) identified in the mature cerebellum by anti-BrdU immunoperoxidase cytochemistry (brown nuclei) following implantation into the neonatal mea external germinal layer (EGL). (The EGL, on the cerebellar surface, disappears as the internal granule layer (IGL) emerges to become the deepest cerebellar cortical layer at the end of organogenesis13) (A) Clone H6-derived cells are present in the IGL ("igl"; arrowheads) of all lobes of the mature cerebellum in this parasagittal section. (Granule ***neurons*** are diminished throughout the cerebellum with some

representative posterior cerebellar lobe indicated by arrowhead "b" in (A), demonstrating the large number of donor-derived cells present within the recipient IGL. (C-G) Increasing magnifications of donor-derived cells (brown nuclei) within the IGL of a mea anterior cerebellar lobe. (Different animal from that in (A,B).) (G) Normarski optics bring out the similarity in size and morphology of the few residual host, BrdU-negative cerebellar granule ***neurons*** (arrowheads) and a BrdU+, donor-derived neuron (arrow), which is representative of those seen in all engrafted lobes of all animals.) (H,I) Confirmation of the neuronal differentiation of a subpopulation of the donor-derived, BrdU+ cells from (A-G) is illustrated by co-labeling with anti-BrdU (green in H) and the mature neuronal marker NeuN (red in I) (indicated with corresponding arrows). (Some adjacent, donorderived cells are non-neuronal as indicated by their BrdU+ (arrowhead in (H)) but NeuN-phenotype (also illustrating the specificity of the immunostaining). (J) Cells within the IGL are confirmed to be human donor-derived cells by FISH with a human-specific probe (red) identifying human chromosomal centromeres. Scale Bars: (A), (B): 100 μ m; (F), (G), (J): 10 μ m!

L6 ANSWER 69 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
 AN 10463023 IFIPAT;IFIUDB;IFICDB
 TI ISOLATION AND TRANSPLANTATION OF RETINAL STEM CELLS
 IN Klassen Henry J; Mizumoto Keiko (JP); Shatos Marie A; Young Michael J
 PA Unassigned Or Assigned To Individual (68000)
 PI US 2003207450 A1 20031106
 AI US 2002-203105 20020806
 WO 2001-US4419 20010212
 20020806 PCT 371 date
 20020806 PCT 102(e) date
 FI US 2003207450 20031106
 DT Utility; Patent Application - First Publication
 FS CHEMICAL
 APPLICATION
 CLMN 45
 GI 19 Figure(s).

FIG. 1 depicts phase-contrast views (left, A) and greenfluorescent protein (GFP) illumination views (right, B) of GFPexpressing, neuroretina-derived retinal stem cell spheres at 3 days (top panel) and 6 days (bottom panel) after dissociation into single cell suspension.

FIGS. 2A and 2B are photomicrographs of NRSCs in vitro, labeled with antibodies against retinal stem cell markers: Ki-67, expressed by mitotic cells (left, FIG. 2A) and nestin, an intermediate filament protein in ***neural*** ***stem*** ***cells*** and immature ***neurons*** (right, FIG. 2B).

FIGS. 3A and 3B are photomicrographs of neuroretina-derived stem cells after their in vitro exposure to serum, labeled with an antibody against glial fibrillary acidic protein, a marker for ***astrocytes*** (anti-GFAP, left, FIG. 3A) and an antibody against neurofilament of 200 kd, a marker for mature ***neurons*** (antiNF200; right, FIG. 3B).

FIGS. 4A-4D are green fluorescent protein(GFP)-illuminated photomicrographs of four examples of mouse retinal explant recipient tissue (obtained postnatally on day 1), co-cultured with mouse retinal stem cell spheres for 7 days in vitro.

FIGS. 5A and 5B are two exemplary in situ photomicrographs of "green", neuroretina-derived retinal stem cells (derived from GFP-expressing transgenic mice), 2 weeks after being grafted in a host adult rd-2 mouse eye, labeled with a red-labeled antibody specific for the photoreceptor-specific marker, rhodopsin.

FIGS. 6A-F are photomicrographs of "green" NRSCs grafted into various retinal sites, 2 weeks post-graft. FIGS. 6A-6C and FIGS. 6D-6F, respectively, show views of the same retinal site, under different illumination: GFP illumination (FIGS. 6A and 6D), red-labeled anti-rhodopsin antibodies (FIGS. 6B and 6E); and ordinary photomicrograph (FIGS. 6F).

FIG. 7 is a confocal photomicrograph of "green" NRSCs grafted into an extra-ocular site, 2 weeks post-graft, labelled with red-labeled, anti-recoverin antibodies.

FIG. 8 is a confocal photomicrograph of "green" NRSCs grafted into a retinal site, 2 weeks post-graft, labelled with antirecoverin antibodies.

FIGS. 9A and 9B are photomicrographs showing GFP (green, FIG. 9A) and rhodopsin (red, FIG. 9B) expression in RD-2 mouse vitreous, 2 weeks after grafting.

FIGS. 10A-10C are photomicrographs of the same graft site: retinal stem cells grafted to the subretinal space of adult retina "green" NRSC from transgenic GFP-expressing mice, grafted to the subretinal space of adult

FIG. 10A shows GFP expression (green illumination); FIG. 10B shows recoverin expression (staining of cells with red-labeled anti-recoverin antibodies); and FIG. 10C shows an overlay or merged view of FIGS. 11A and 11B.

FIGS. 11A-11C are confocal micrographs of the same graft site: "green" NRSC from transgenic GFP-expressing mice, grafted to the subretinal space of adult retina in lesioned B6 mouse subretinal space, 2 weeks after grafting. FIG. 11A shows GFP expression (green illumination); FIG. 11B shows recoverin expression (staining of cells with red-labeled anti-recoverin antibodies); and FIG. 11C shows an overlay or merged view of FIGS. 11A and 11B.

FIGS. 12A-12C show confocal micrographs of the same graft site: "green" NRSC grafted into lesioned B6 mouse subretinal space, 4 weeks after grafting. FIG. 12A shows recoverin expression (staining of cells with red-labeled anti-recoverin antibodies); FIG. 12B shows GFP expression (green illumination); and FIG. 12C is an overlay or merged view of FIGS. 12A and 12B.

FIG. 13 a low-power photomicrograph of cultured, human neuroretina-derived stem cells (hNRSCs), showing bipolar, multipolar, and round cells, with neuritic processes.

FIG. 14 is a photomicrograph of hNRSCs undergoing cell division.

FIG. 15 is a low-power photomicrograph of cultured hNRSCs, showing dividing cells and progenitor cells. The cells are observed in another sequence to be non-pigmented.

FIG. 16 is a low-power photomicrograph of cultured hNRSCs, developing long neuritic processes.

FIG. 17 is a phase photomicrograph showing the mitotic profile of hNRSCs.

FIG. 18 is a bright-field photomicrograph of hNRSCs, showing that they are not pigmented.

FIGS. 19A-19C are sequentially timed photomicrographs of the same cultured hNRSC specimen, showing a retinal stem or progenitor cell undergoing cell division. FIG. 19A shows the stem/progenitor cell before mitosis; FIG. 19B shows it during mitosis; and FIG. 19C shows it just after mitosis (with 2 daughter nuclei). FIG. 19C also shows a classic profile of an early, neural stem/progenitor cell.

L6 ANSWER 70 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10459418 IFIPAT;IFIUDB;IFICDB
TI TREATMENT OF CENTRAL NERVOUS SYSTEM DISORDERS
IN Delfani Kioumars (SE); Janson Ann Marie (SE); Kuhn H Georg (DE); Plate Karlheinz (DE); Schanzer Anne (DE); Wachs Frank-Peter (DE); Zhao Ming (SE)

PA Unassigned Or Assigned To Individual (68000)

PI US 2003203844 A1 20031030

AI US 2002-246091 20020918

PRAI US 2001-323381P 20010919 (Provisional)

US 2001-326044P 20010928 (Provisional)

FI US 2003203844 20031030

DT Utility; Patent Application - First Publication

FS CHEMICAL

APPLICATION

CLMN 106

GI 35 Figure(s).

FIG. 1 depicts the effect of PDGFs on proliferation of cultured, non-adherent mouse neurospheres.

FIG. 2 shows the effect of PDGFs on proliferation of adherent cultured mouse NSC/progenitor cells.

FIG. 3 is Western blots showing the effect of PDGF-AA in cultured neurospheres. Downregulation of GFAP (left); upregulation of beta-III Tubulin (right).

FIG. 4 depicts the effect of PDGF-AA in cultured mouse NCCs/ neural progenitor cells (NPCs). Upper panel: adult mouse NSCs treated with PDGF-AA for 6 days switch from an undifferentiated (left panel) to a neuronal phenotype (right panel) increasing the specific neuronal marker beta-III Tubulin. Lower panel: in contrast to the above, adult mouse NSCs treated with PDGF-AA for 6 days significantly decrease the specific expression of the glial specific marker GFAP indicating that the astroglial component was reduced in presence of PDGF-AA.

FIG. 5 shows the effect of PDGF-AA and PDGF-BB on neuronal differentiation of adult mouse stem cells. Compared to the control (panel A) the stimulation with PDGF-AA (panel B) and PDGF-BB (panel C) significantly increase the number of betaIII Tubulin positive cells in culture.

FIG. 6 is a Western blot showing the effect of PDGF-AA and PDGFBB on neuronal differentiation of adult mouse stem cells. Compared with the control (A) the stimulation with PDGF-AA (B) and PDGF-BB (C)

were normalized.

FIG. 7 represents the effect of PDGF-BB on the number of BrdU positive cells in the dentate gyrus.

FIG. 8 shows the effect of PDGF-BB on BrdU positive cells in the striatum.

FIG. 9 depicts a large neuron in the MPTP-lesioned mouse receiving PDGF.

This tyrosine hydroxylase-positive (brown) nerve cell with a violet nucleolus in the centrally placed nucleus without brown staining had an estimated volume of 10, 900 μm^3 . Anti-tyrosine hydroxylase was visualized with the avidin-biotin-peroxidase-DAB method and cresyl violet was employed as counterstain. Bar=10 μm .

FIG. 10 represents a small tyrosine hydroxylase-positive neuron in the MPTP-lesioned PDGF-treated mouse. The cell had an estimated volume of 170 μm^3 , e.g. similar to a small glia cell, but demonstrated a clear neuronal bipolar phenotype with long dendrites that extended for more than 100 μm in the 40 μm thick section.

FIG. 11 shows a 3H thymidine label (black dots) over a substantia nigra neuron (Nissl stain) in a PDGF-treated MPTP-lesioned mouse. Bar=10 μm .

FIG. 12 shows that PDGFR-A and PDGFR-B genes are expressed in cultured human ***neural*** ***stem*** ***cells***.

FIG. 13 shows immunohistochemically stained BrdU-labeled cells in the striatum at 5 weeks after PDGF infusion. (A) PBS control, (B) PDGF treated.

FIG. 14 represents the number of BrdU-labeled cells in the striatum at 12 days and 5 weeks after PDGF or BDNF infusion. *p less-than 0.05 compared to PBS infused controls. Means+-SEM.

FIG. 15 depicts the number of BrdU/NeuN double-labelled cells in the striatum at 5 weeks after PDGF or BDNF infusion. Note that due to heterogeneity of variance with groups, data were logarithmically transformed. *p less-than 0.05 compared to PBS infused controls. Means+-SEM.

FIG. 16 shows the number of BrdU-labeled cells in the substantia nigra at 12 days and 5 weeks after PDGF or BDNF infusion. *p less-than 0.05 compared to PBS infused controls. Means+-SEM.

FIG. 17 depicts neurogenesis in the hippocampus which is characterized by proliferative clusters of cells along the border between the granule cell layer (g) and the hilus region (h). These cells begin to migrate into the granule cell layer about 1 week after their last cell division and can be colabeled with markers for granule cells (e.g., NeuN and Calbindin).

FIG. 18 represents Flk-1-positive cells in the dentate gyrus. Frequently Flk-1 positive cells are associated with clusters of proliferating cells. These clusters contain endothelial cells as well as NSCs/NPCs. (A) Multiple immunofluorescence with BrdU, VEGF and Flk-1. Note the colocalization of Flk-1 and BrdU. (B) BrdU positive cells are associated with blood vessels as shown with RECA staining (rat endothelial cell antigen).

FIG. 19 shows the localization of Flk-1 immunoreactive cells in the ventricle wall. The ependymal layer of the ventricle wall shows intense immunoreactivity for Flk-1. Since ***neural*** ***stem*** ***cells*** can be generated from ependymal cells of the ventricle wall, Flk-1 could function as a stem cell marker and has perhaps a function in stem cell recruitment.

FIG. 20 represents intracerebroventricular infusion of VEGF. VEGF was infused via osmotic minipumps for 7 days into the lateral ventricle of adult rats. Increased BrdU labeling in the granule cell layer of the dentate gyrus is observed 4 weeks after infusion of VEGF into the lateral ventricle.

FIG. 21 shows VEGF mRNA levels. Neurospheres were cultured in a defined medium in the presence of EGF and FGF. Using RT-PCR, the mRNA from these cells was examined for the expression of 4 different isoforms of VEGF. GAPDH expression served as quality control of the mRNA.

FIG. 22 shows Flk-1 mRNA levels. Left. ***Neural*** ***stem*** ***cells*** from the lateral ventricle wall (LV) and hippocampus (HC) of the adult rodent can be grown as neurospheres using defined medium and the growth factors ***FGF*** - ***2*** and EGF. Right. From spheres under growth condition mRNA was isolated and RT-PCR for Flk-1 was performed. Actin was used as a control for mRNA amount.

FIG. 23 shows the release of VEGF protein. Competitive ELISA for quantification of VEGF-secretion was used on adult NSCs from the rat lateral ventricle wall. As a positive control, the endothelial cell line HMEC-1 and primary retinal pigment epithelial cells (RPE) were used.

FIG. 24 depicts VEGF-dependent proliferation of NSCs. Neurosphere cultures were grown in serum free medium containing EGF/ ***FGF*** - ***2***. VEGF was added to this medium in different concentrations for 7 days and the total number of NSCs was counted.

FIG. 25 shows that the effect of VEGF is modulated via the Flk-1 receptor.

VEGF-A165 (triangle) and VEGF-A121 (squares). VEGF-A165 bind to all VEGF-receptors whereas VEGFA121 binds preferentially to the Flk-1 receptor.

FIG. 26 shows the lineage potential of clonally-derived rat ***neural*** ***stem*** ***cell*** cultures. Individual clones derived from rat lateral ventricle wall cultured on poly-ornithin/laminin matrix were differentiated in NB/B27 medium supplemented with 1% FCS for 7 days and immunostained for the presence of (a) ***neurons*** with BIII-tubulin, (b) ***astrocytes*** with GFAP or (c) oligodendrocytes with GalC (bar=40 μm).

FIG. 27 is a Dose-Response-Curve for VEGF in rat ***neural*** ***stem*** ***cells*** from the adult lateral ventricle wall. The dose-response curve was performed on clonally derived ***neural*** ***stem*** ***cells***. Maximal growth activity can be observed starting at 50 ng/ml.

FIG. 28 (A) In basal medium VEGF (50 ng/ml) stimulates the expansion of ***neural*** ***stem*** ***cell*** cultures about 5-fold. The VEGFReceptor inhibitors PADQ and SU1498 are both able to block the VEGF response at concentrations specific for VEGF receptor flk1. Total cell counts at 7 days after treatment. (B) In growth conditions (including EGF and ***FGF*** - ***2***), VEGF stimulates the expansion of ***neural*** ***stem*** ***cell*** cultures about 2-fold. The VEGFReceptor tyrosine kinase inhibitors PADQ and SU1498 are both able to block the VEGF response. Total cell counts at 7 days after treatment in growth medium

FIG. 29 shows VEGF production and release into the cell culture medium. Cells were cultured in serum free medium and medium was collected at 2 days (2 d) or 8 days (8 d) in medium. HUVEC: Human umbilical vein endothelial cells, huRPE: human retinal pigment epithelial cells.

FIG. 30 represents NSCs under growth conditions (with EGF and ***FGF*** - ***2***) VEGF-receptor-Tyrosine kinase receptor blocker PADQ and SU1498 are both able to significantly reduce the growth of ***neural*** ***stem*** ***cell*** cultures. DMSO was used to dissolve the inhibitors and had no effect on the growth rate. Total cell counts at 7 days after treatment.

FIG. 31 shows that BrdU incorporation is increased under VEGF and reduced under VEGF receptor blockade. ***Neural*** ***stem***

cell cultures were treated with 50 ng/ml VEGF, 100 nM PADQ or 7 nM SU1498 for 7 days. BrdU (10 μM) was added to the culture medium 24 hrs before cells were harvested and lysed. DNA was extracted and BrdU content was determined using an anti-BrdUELISA. The data are presented as percent changes in optical density compared to control (Growth medium).

FIG. 32 shows that DNA fragmentation is increased under VEGF and reduced under VEGF receptor blockade. ***Neural*** ***stem***

cell cultures were treated with 50 ng/ml VEGF, 100 nM PADQ or 7 nM SU1498 for 7 days. BrdU (10 μM) was added to the culture medium 24 hrs before cells were harvested and lysed. DNA was extracted and BrdU content was determined using an anti-BrdUELISA. The data are presented as percent changes in optical density compared to control (Growth medium).

FIG. 33 represents in vitro generation of spheres is stimulated by intraventricular VEGF infusion. After 7 days of intraventricular infusion of either artificial cerebrospinal fluid (CSF) or VEGF, cells were isolated from the lateral ventricle wall, seeded at 10000 cells/well in Growth medium (Neurobasal+B27+EGF+ ***FGF*** - ***2*** +heparin) and grown in culture for 3 weeks. The efficiency to generate spheres from the lateral ventricle wall is substantially increased by previous in vivo infusion of VEGF. It was concluded from this finding, that VEGF stimulates the multipotent ***neural*** ***stem*** ***cells*** of the lateral ventricle wall in vivo leading to a facilitated ***neural*** ***stem*** ***cell*** growth in vitro.

FIG. 34 shows that the VEGF and FLT-4 genes are expressed in cultured human ***neural*** ***stem*** ***cells***.

FIG. 35 shows that the FLT-1 and FLK-1 genes are expressed in cultured human ***neural*** ***stem*** ***cells***.

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METHODS OF SCREENING BIOLOGICAL AGENTS; DETECTING MODULATOR OF CELL PROLIFERATION, DIFFERENTIATION, VIABILITY, PHENOTYPES OR ACTIVITY; PREPARE CULTURE, INCUBATE WITH MODULATOR, MONITOR ADJUSTMENT IN CELL CHARACTERISTICS, ADJUSTMENT IN CHARACTERISTICS INDICATE MODULATOR

IN Baetge E Edward; Hammang Joseph P; Reynolds Brent (CA); Weiss Samuel (CA)
PA Unassigned Or Assigned To Individual (68000)
PI US 2003082515 A1 20030501
AI US 2002-199189 20020719

US	1992-961813	19921016	CONTINUATION	ABANDONED
US	1992-967622	19921028	CONTINUATION	ABANDONED
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US	1991-726812	19910708	CONTINUATION-IN-PART	ABANDONED
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6 Figure(s).

FIG. 1: Diagram Illustrating the Proliferation of a Multipotent ***Neural*** ***Stem*** ***Cell***

(A) In the presence of a proliferation-inducing growth factor the stem cell divides and gives rise to a sphere of undifferentiated cells composed of more stem cells and progenitor cells. (B) When the clonally derived sphere of undifferentiated cells is dissociated and plated as single cells, on a non-adhesive substrate and in the presence of a proliferation-inducing growth factor, each stem cell will generate a new sphere. (C) If the spheres are cultured in conditions that allow differentiation, the progenitor cells differentiate into ***neurons*** ***astrocytes*** and oligodendrocytes.

FIG. 2: Proliferation Of Epidermal Growth Factor (EGF) Responsive Cells After 2 days in vitro EGF-responsive cells begin to proliferate (FIG. 2A). After 4 days in vitro small clusters of cells known as neurospheres are apparent (FIG. 2B). The neurospheres of continuously proliferating cells continue to grow in size (FIG. 2C) until they lift off the substrate and float in suspension (FIG. 2D). At this stage, the floating spheres can be easily removed, dissociated into single cells and, in the presence of EGF, proliferation can be re-initiated. (Bar: 50 μm).

FIG. 3: Differentiation Of Cells From Single EGF-Generated Spheres Into ***Neurons***, ***Astrocytes***, And Oligodendrocytes

Triple-label immunocytochemistry with antibodies to microtubule associated protein (MAP-2), glial fibrillary acidic protein (GFAP), and O4 (a cell surface antigen) are used to detect the presence of ***neurons*** (FIG. 3B), ***astrocytes*** (FIG. 3C) and oligodendrocytes (FIG. 3D), respectively, from an EGF-generated, stem cell-derived neurosphere (FIG. 3A) derived from primary culture. (Bar: 50 μm).

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TI GENERATION OF DIFFERENTIATED TISSUE FROM NUCLEAR TRANSFER EMBRYONIC STEM CELLS AND METHODS OF USE; GENERATION OF POOL OF NEURONAL CELLS; OBTAIN GENETICALLY ENGINEERED CELL, CULTURE, INCUBATE WITH FIBRONECTIN, RECOVER NEURONAL CELLS
IN Mombaerts Peter; Perry Anthony (JP); Studer Lorenz; Tabar Viviane;
PA Wakayama Teruhiko (JP)
Unassigned Or Assigned To Individual (68000)
PI US 2003036195 A1 20030220
AI US 2002-127740 20020422
PRAI US 2001-285654P 20010420 (Provisional)
FI US 2003036195 20030220
DT Utility; Patent Application - First Publication
FS CHEMICAL
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6 Figure(s).

FIGS. 1A-1E show the dopaminergic and serotonergic differentiation of ntES cells in vitro. Embryoid bodies were plated under conditions favoring CNS selection followed by dopaminergic induction. Images shown are of C15. FIG. 1A shows the colocalization of tyrosine-hydroxylase (TH, green) and beta-III tubulin (red). FIG. 1B shows the presence of serotonergic (Ser, green) and TH (red) ***neurons***. Scale bar=100 μm. FIG. 1C shows the yield of TH+ ***neurons*** varied among the cell lines tested, with greater-than 50% of total cell number in C15 cells. Other commonly used ES lines (E14, AB2.2) generated a percentage of TH+ cells falling within the range shown by the ntES cells. C4, C15, C16, CN1, CN2, CT1, CT2 represent ntES, and AB2.2 and E14 ES cell lines. FIG. 1D is a representative chromatogram showing elution and electrochemical detection of dopamine (DA) and serotonin (Ser) from conditioned medium by reverse phase HPLC. FIG 1E shows the quantification of dopamine and serotonin release. Neurotransmitter concentration was determined in conditioned

minutes in buffer solution) and upon evoked release (KCl; 15 minutes in 56 mM KCl buffer). Serotonin release was low under basal and evoked conditions, probably reflecting a lower number of serotonergic ***neurons***.

FIGS. 2A-2D demonstrates totipotency of ntES cells in vivo. FIG. 2A demonstrates the contribution of C57BL/6nu/nu-nudentES cells (line CN1) to chimeric offspring following injection into ICR x ICR fertilization-derived blastocysts in offspring 14 days after birth in which the dark coat color derives from the ntES cell contribution. In FIG. 2B the male indicated with an asterisk in FIG. 2A was crossed at 8 weeks with a white (ICR) female, producing a litter containing three dark offspring, confirming the contribution of C57BL/6nu to the germ line. Asterisks in FIGS. 2A and 2B indicate the same male. Cloning using ntES cells as nucleus donors shown in FIG. 2C, exemplified using a B6D2F1 clone (line C4) shown at 12 weeks with her litter. FIG. 2D depicts the PCR analysis of microsatellite markers in genomic DNA from ntES cell lines (CN1, CN2, CN3, CN4) and cloned offspring (cCN1) confirms the clonal origin of the C57BL/6nu/nu pup derived from line CN1. Polymorphic markers D8Mit248, D9Mit191 and D4Mit204 are conserved between genomic DNA from the ntES cell lines and the cloned pup, but differ from those of the ICR surrogate mother (CD1) or ooplast recipient strain, B6D2F1 (F1).

FIGS. 3A-3D show the characterization of nuclear transfer ES (ntES) cells in vitro. FIG. 3A shows phase contrast microscopy of representative ntES cells at passage five. FIG. 3B shows that ntES cells readily formed embryoid bodies. FIG. 3C depicts that staining of near-confluent cultures for the undifferentiated ES cell marker, alkaline phosphatase reveals islands of undifferentiated ntES cells in the line, C1. FIG. 3D shows the PCR analysis of microsatellite markers D4Mit204 and D7Mit22 in genomic DNA from selected ntES cell lines (C13, C15, C16, C17) and mouse strains used in their derivation, showing a conserved amplimer profile with that of 129F1 nucleus donor strains D1 and D2, but not those of the oocyte donor (F1) or surrogate mother (CD1).

FIG. 4 shows the multi-lineage differentiative potential of ntES cells. Embryoid bodies derived from ntES cell lines were differentiated for nine days in vitro. Immunohistochemical analysis revealed positive staining for markers characteristic of endodermal lineage (Troma-1 and alpha-fetoprotein), mesodermal lineage (myosin, fibronectin and smooth muscle actin) and ectodermal lineage (nestin, PSA-NCAM and cytokeratin) as indicated. All three lines exhibited totipotent potential, differing in the quantitative distribution of the various markers. Images shown are for C15 and C16. Scale bar=25 mu m in all panels.

FIG. 5 shows the five distinct steps for the derivation of dopaminergic ***neurons*** from mouse ntES cells.

FIG. 6 shows the expression of specific midbrain transcription and patterning factors by the ntES derived dopamine ***neurons***.

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TI PLATELET DERIVED GROWTH FACTOR (PDGF)-DERIVED NEUROSPHERES DEFINE A NOVEL
CLASS OF PROGENITOR CELLS
IN Chojnacki Andrew K (CA); Weiss Samuel (CA)
PI US 2002197238 A1 20021226
AI US 2002-131230 20020425
PRAI US 2001-287214P 20010427 (Provisional)
US 2001-307070P 20010720 (Provisional)
FI US 2002197238 20021226
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L6 ANSWER 74 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10220602 IFIPAT;IFIUDB;IFICDB
TI CULTURES OF HUMAN CNS ***NEURAL*** ***STEM*** ***CELLS*** ;
CELL CULTURE OF NERVOUS SYSTEM CELLS
IN Carpenter Melissa
PA Unassigned Or Assigned To Individual (68000)
PI US 2002164309 A1 20021107
AI US 2002-134234 20020429
RLI WO 1998-US18597 19980904 Section 371 PCT Filing UNKNOWN
US 2000-486302 20001016 CONTINUATION PENDING
FI US 2002164309 20021107
DT Utility; Patent Application - First Publication
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4 Figure(s).

FIG. 1 shows a representation of spheres of proliferating 9FBr human ***neural*** ***stem*** ***cells*** (passage 6) derived from human forebrain tissue.

FIG. 2, Panel A, shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 6.5Fbr cultured in (a) defined media containing EGF, FGF and leukemia inhibitory factor ("LIF") (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds); Panel B shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 9Fbr cultured in (a) defined media containing EGF, FGF and LIF (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds); Panel C shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 9.5Fbr cultured in (a) defined media containing EGF, FGF and LIF (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds); Panel D shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 10.5Fbr cultured in (a) defined media containing EGF, FGF and leukemia inhibitory factor ("LIF") (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds).

FIG. 3 shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 9Fbr cultured in (a) defined media containing EGF and basic fibroblast growth factor (" ***bFGF*** ") (shown as open diamonds), and (b) defined media with EGF but without ***bFGF*** (shown as closed diamonds).

FIG. 4 shows a graph of cell number versus days in culture for an Mx-1 conditionally immortalized human glioblast line derived from a human ***neural*** ***stem*** ***cell*** line. The open squares denote growth in the presence of interferon, the closed diamonds denote growth in the absence of interferon.

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EMBRYONIC STEM CELLS AND NEURAL PROGENITOR CELLS DERIVED THEREFROM; REGENERATION CELLS OF NERVOUS SYSTEM

IN

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PA

Unassigned Or Assigned To Individual (68000)

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US 2002164308 A1 20021107

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US 2001-970543 20011004

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US 2001-808382 20010314 CONTINUATION-IN-PART PENDING

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AU 2000-6211 20000314

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Utility; Patent Application - First Publication

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38 Figure(s).

FIG. 1 shows phase contrast micrographs of ES cells and their differentiated progeny. A, inner cell mass three days after plating. B, colony of ES cells. C, higher magnification of an area of an ES cell colony. D, an area of an ES cell colony undergoing spontaneous differentiation during routine passage. E, a colony four days after plating in the absence of a feeder cell layer but in the presence of 2000 units/ml human LIF undergoing differentiation in its periphery. F, neuronal cells in a high density culture. Scale bars: A and C, 25 microns; B and E, 100 microns; D and F, 50 microns.

FIG. 2 shows marker expression in ES cells and their differentiated somatic progeny. A, ES cell colony showing histochemical staining for alkaline phosphatase. B, ES cell colony stained with antibody MC-813-70 recognising the SSEA-4 epitope. C, ES cell colony stained with antibody TRAL-60. D, ES cell colony stained with antibody GCTM-2. E, high density culture, cell body and processes of a cell stained with antineurofilament 68 kDa protein. F, high density culture, cluster of cells and network of processes emanating from them stained with antibody against neural cell adhesion molecule. G, high density culture, cells showing cytoplasmic filaments stained with antibody to muscle actin. H, high density culture, cell showing cytoplasmic filaments stained with antibody to desmin. Scale bars: A, 100 microns; B-D, and F, 200 microns; E, G and H, 50 microns.

FIG. 3 shows RT-PCR analysis of gene expression in ES cells and their differentiated derivatives. All panels show 1.5% agarose gels stained with ethidium bromide. A, expression of Oct-4 and b-actin in ES stem

cell culture, b-actin. Lane 3, stem cell culture, Oct-4. Lane 4, stem cell culture, PCR for Oct-4 carried out with omission of reverse transcriptase. Lane 5, high density culture, b-actin. Lane 6, high density culture, Oct-4. Lane 7, high density culture, PCR for Oct-4 carried out with omission of reverse transcriptase. b-actin band is 200 bp and Oct-4 band is 320 bp. B, expression of nestin and Pax-6 in neural progenitor cells that were derived from differentiating ES colonies. Left lane, 100 bp DNA ladder; lane 1, b-actin in HX 142 neuroblastoma cell line (positive control for nestin PCR); lane 2, b-actin in neural progenitor cells; lane 3, nestin in HX 142 neuroblastoma cell line; lane 4, nestin in neural progenitor cells; lane 5, nestin PCR on same sample as lane 4 without addition of reverse transcriptase; lane 6, Pax-6; lane 7, Pax-6 PCR on same sample as line 6 without addition of reverse transcriptase. Nestin band is 208 bp, Pax-6 is 274 bp. C, expression of glutamic acid decarboxylase in cultures of ***neurons***. Left lane, 100 bp DNA ladder; lane 1, b-actin; lane 2, b-actin PCR on same sample as lane 1 without addition of reverse transcriptase; lane 3, glutamic acid decarboxylase; lane 4 glutamic acid decarboxylase on same sample as lane 3 without addition of reverse transcriptase. Glutamic acid decarboxylase band is 284 bp. D, expression of GABA A alpha 2 receptor. Left lane, 100 bp DNA ladder; lane 1, b-actin; lane 2, GABA A alpha 2 receptor; lane 3, PCR without addition of reverse transcriptase. GABA A alpha 2 receptor subunit band is 471 bp.

FIG. 4 shows histology of differentiated elements found in teratomas formed in the testis of SCID mice following inoculation of HES-1 or HES-2 colonies. A, cartilage and squamous epithelium, HES-2. B, neural rosettes, HES-2. C, ganglion, gland and striated muscle, HES-1. D, bone and cartilage, HES-1. E, glandular epithelium, HES-1. F, ciliated columnar epithelium, HES-1. Scale bars: A-E, 100 microns; F, 50 microns.

FIG. 5 shows phase contrast microscopy and immunocytochemical analysis of marker expression in neural progenitor cells isolated from differentiating ES cultures. A, phase contrast image of a sphere formed in serum-free medium. B-D, indirect immunofluorescence staining of spheres, 4 hours after plating on adhesive substrate, for N-CAM, nestin, and vimentin respectively. In C and D, cells at the base of the sphere were placed in plane of focus to illustrate filamentous staining; confocal examination revealed that cells throughout the sphere were decorated by both antibodies. Scale bar is 100 microns in all panels.

FIG. 6 shows phase contrast appearance and marker expression in cultures of ***neurons*** derived from progenitor cells shown in FIG. 5. A, phase contrast micrograph of differentiated cells emanating from a sphere plated onto adhesive surface. B-H, indirect immunofluorescence microscopy of differentiated cells decorated with antibodies against 200 kDa neurofilament protein (B), 160 kDa neurofilament protein (C), MAP2a+b (D), glutamate (E), synaptophysin (F), glutamic acid decarboxylase (G) and beta-tubulin (H). Scale bars: A, ;B, 100 microns; C, 200 microns; D, 20 microns; E and F, 10 microns; G, 20 microns; H, 25 microns.

FIG. 7 shows neural precursors proliferating as a monolayer on a plastic tissue culture dish in the presence of EGF and ***bFGF***. These monolayer cultures of proliferating cells were obtained after prolonged cultivation (2-3 weeks) of the spheres in the presence of growth factors without sub-culturing.

FIG. 8 shows phase contrast appearance of a culture consisting of differentiated neural cells.

FIG. 9 shows phase contrast appearance of a sphere that is formed 72 hours after the transfer of a clump of undifferentiated ES cells into serum free medium (Scale bar 100 microns).

FIG. 10 shows linear correlation between the volume of spheres and the number of progenitor cells within a sphere. Spheres of various diameters that were generated from differentiating ES colonies and were propagated for 14-15 weeks were dissociated into single cell suspension and the number of cells per sphere was counted.

FIG. 11 shows indirect immunofluorescence staining of a sphere, 4 hours after plating on adhesive substrate, for N-CAM. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of the resulting spheres for 5 passages. (Scale bar 100 microns).

FIG. 12 shows indirect immunofluorescence membranous staining for N-CAM of single cells at the periphery of a sphere 4 hours after plating on adhesive substrate. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of the resulting spheres for 5 passages. (Scale bar 25 microns).

FIG. 13 shows indirect immunofluorescence staining of a sphere 4 hours after plating on adhesive substrate for the intermediate filament nestin. Cells at the base of the sphere were placed in plane of focus to

transfer or undifferentiated ES cells into serum free medium and propagation of resulting spheres for 5 passages. (Scale bar 25 microns). FIG. 14 shows indirect immunofluorescence microscopy of a differentiated cell decorated with antibodies against the oligodendrocyte progenitor marker O4. (Scale bar 12.5 microns).

FIG. 15 shows indirect immunofluorescence staining of a sphere 4 hours after plating on adhesive substrate for the intermediate filament vimentin. Cells at the base of the sphere were placed in plane of focus to illustrate filamentous staining. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of resulting spheres for 7 passages. (Scale bar 25 microns).

FIG. 16 shows the growth pattern of spheres that were generated directly from undifferentiated ES cells. Each bar represents the mean (+-SD) increment in volume per week of 24 spheres at first to sixteen weeks after derivation. A more excessive growth rate is evident during the first 5 weeks.

FIG. 17 shows persistent growth in the volume of spheres along time. Each bar represents the mean (+-SD) increment in volume per week of 24 spheres at nine to twenty one weeks after derivation. The spheres were generated from differentiating ES colonies.

FIG. 18 shows linear correlation between the volume of spheres and the number of progenitor cells within a sphere. Spheres of various diameters, that were generated directly from undifferentiated ES cells and were propagated 5-7 weeks, were dissociated into single cell suspension and the number of cells per sphere was counted.

FIG. 19 shows RT-PCR analysis of gene expression in ES cells (a week after passage) and neural spheres derived from differentiating colonies and directly from undifferentiated ES cell. All panels show 2% agarose gels stained with ethidium bromide. Lanes 1, 2 and 3, Oct-4 in ES cell culture, neural spheres derived from differentiating colonies, neural spheres derived from undifferentiated ES cells. Lane 4, stem cell culture, PCR for Oct-4 carried out with omission of reverse transcriptase. Lanes 5, 6, and 7, nestin in ES cell culture, neural spheres derived from differentiating colonies, neural spheres derived from undifferentiated ES cells. Lane 8, stem cell culture, PCR for nestin carried out with omission of reverse transcriptase. Lanes 9, 10 and 11, Pax-6 in ES cell culture, neural spheres derived from differentiating colonies, neural spheres derived from undifferentiated ES cells. Lane 12, stem cell culture, PCR for Pax-6 carried out with omission of reverse transcriptase. Lane 13, 100 bp DNA ladder. Oct-4 band is 320 bp, nestin is 208 bp and Pax-6 is 274 bp.

FIG. 20 shows indirect immunofluorescence microscopy of differentiated ***astrocytes*** cells decorated with antibody against GFAP. (Scale bar 25 microns).

FIG. 21 shows indirect immunofluorescence microscopy of brain sections of two mice (A and B) 4 weeks after transplantation of human neural precursors prelabeled with BrDU. Cells with a nucleus decorated with anti BrDU (brown stain, black arrow) are evident near the ventricular surface (white arrow indicate mouse unstained nuclei, bar=20 microns).

FIG. 22 shows indirect immunofluorescence microscopy of brain sections of a mice 4 weeks after transplantation of human neural precursors prelabeled with BrDU. Wide spread distribution of transplanted human cells decorated by anti BrDU antibodies is evident in the periventricular areas. The periventricular area in A is demonstrated at a higher magnification in B and C. (Bars=150, 60 and 30 microns in A, B and C).

FIG. 23 shows indirect immunocytochemical microscopy of brain sections of a mice 4 weeks after transplantation of human neural precursors prelabeled with BrDU. The transplanted human cells are migrating along the rostral migratory stream (bar=150 microns).

FIG. 24 shows RT-PCR analysis of gene expression in neural spheres derived from differentiating (A) and undifferentiated (B) ES cells. All panels show 2% agarose gels stained with ethidium bromide. Lanes 1 and 10, 100 bpDNA ladder; Lane 2, CD34; Lane 3, Flk-1; lane4, HNF-3; lane 5, alafafetoprotein. Lanes 6-9 PCR reaction on the same samples as lanes 2-5 carried out with the omission of reverse transcriptase. CD-34 band is 200 bp, Flk-1 is 199, HNF-3 is 390, AFP is 340 bp.

FIG. 25 shows by RT-PCR analysis the expression of GFAP and the pip gene in differentiated cells from neural spheres derived from differentiating ES cell colonies. The expression of GFAP indicates differentiation into ***astrocytes*** while the presence of both dm-20 and pip transcripts indicate that differentiation into oligodendrocyte cells has occurred.

Lanes 2, 4, 6 and lanes 3, 5, 7 are from two separate RNA samples from differentiated spheres that were independently derived from ES cells.

Lane 1 and 8, 100 bp DNA ladder; Lanes 2 and 4, GFAP; lanes 3 and 5, plp and dm-20; lanes 6 and 7, PCR reaction on the same samples as lanes 3 and

383, pip band is 354 bp and dm-20 is 249 bp.

FIG. 26 shows a dark field stereomicroscopic photograph of areas (arrows) destined to give rise to neural precursors in a differentiating ES cell colony 3 weeks after passage (bar=1.6 mm).

FIG. 27 shows indirect immunochemical analysis of marker expression in cultures of ***neurons*** derived from progenitor cells that were derived directly from undifferentiated ES cells: A, indirect immunofluorescence microscopy of neurites decorated with antibody against 160 kDa neurofilament protein. B and C, indirect immunofluorescence staining of differentiated cells for MAP2a+b and beta-tubulin III. Scale bars: A 100 microns, B and C 10 microns.

FIG. 28 shows indirect immunochemical analysis of the expression of tyrosine hydroxylase. Neurites (A) and a differentiated cell (B) are decorated with antibodies against tyrosine hydroxylase. Scale bars: 30 microns.

FIG. 29 shows in vivo differentiation into ***astrocyte*** cells of transplanted human neural progenitors prelabeled with BrDU. Donor cells are identified by indirect immunochemical detection of BrDU (dark nuclei, arrows). Dual staining demonstrates donor cells decorated by anti GFAP (orange). Transplanted cells are migrating into the brain parenchyma (white arrow) and are also found in the periventricular zone (dark arrow) (A), A higher magnification of cells that have differentiated into ***astrocytes*** and migrated into the host brain (B).

FIG. 30 shows in vivo differentiation into oligodendrocyte cells of transplanted human neural progenitors prelabeled with BrDU. Donor cells are identified by indirect immunochemical detection of BrDU (dark nuclei, arrows). Dual staining demonstrates donor cells decorated by anti CNPase (orange).

FIG. 31 shows cumulative growth curve for human neural progenitors derived from differentiating colonies. (A) Continuous growth is evident during an 18-22 week period. The increment in the volume of the spheres was continuously monitored as an indirect measure of the increase in cell numbers. A linear positive correlation between the volume of the spheres and the number of cells within the spheres (B, insert) was maintained along cultivation. It supported the validity of monitoring the increment of sphere volume as an indirect indicator of cell proliferation.

FIG. 32 shows RT-PCR analysis of the expression of non-neural markers in human ES derived spheres. All panels show 2% agarose gels stained with ethidium bromide. The symbols + and - indicate whether the PCR reaction was performed with or without the addition of reverse transcriptase. A 1 Kb plus DNA ladder was used in all panels. beta-actin band is 291 bp, keratin is 780 bp, Flk-1 is 199 bp, CD34 is 200 bp, AC-133 is 200 bp, transferin is 367 bp, amylase is 490 bp and alpha 1 anti trypsin is 360 bp.

FIG. 33 shows a phase contrast micrograph of differentiated cells growing out from a sphere 2 weeks after plating onto an adhesive surface and culture in the absence of growth factors. Scale bar is 200 mu m.

FIG. 34 shows RT-PCR analysis of the expression of neuronal and glial markers in differentiated cells originating from human ES derived neural spheres. All panels show 2% agarose gels stained with ethidium bromide. The symbols + and - indicate whether the PCR reaction was performed with or without the addition of reverse transcriptase. A 1 Kb plus DNA ladder was used in all panels. Plp and dm-20 bands are 354 bp and 249 bp respectively, MBP is 379 bp, GFAP is 383 bp, NSE is 254 bp and NF-M is 430 bp.

FIG. 35 shows indirect immunochemical analysis of the expression of serotonin (A) and GABA (B). Scale-bars are 20 mu m.

FIG. 36 shows dissemination of transplanted BrdU+ human ESderived neural progenitor cells in the mouse host brain.

(A) At 2 days after transplantation most cells were found lining the ventricular wall. (B) After 4-6 weeks most cells had left the ventricles (V) and populated the corpus callosum (CC), fimbria (fim), internal capsule (i.c.). BrdU+ cells were not found in the striatum (str) or CA region of the hippocampus (hipp). (C) Chains of BrdU+ cells were found in the rostral migratory stream (RMS). (D) BrdU+ cells in the periventricular white matter. (E) Higher magnification of D, to show nuclear specific localization of BrdU.

FIG. 37 shows identification of the transplanted cells in the brain by human and neural-lineage specific markers. (A) A typical chain of transplanted cells in the corpus callosum, stained with human specific anti-mitochondrial antibody. The mitochondrial staining (green fluorescence) on Nomarsky background (blue, cell nuclei indicated by asterisk) shows a typical perinuclear localization. (B) Double staining for BrdU (green fluorescence) and human specific anti ribonuclear protein (red fluorescence) shows nuclear co-localization, indicating that BrdU+

from the periventricular region, colabeled with BrdU (green), indicating its origin from the graft. (D) An NG2+ oligodendrocyte progenitor (red) in the periventricular region, co-labeled with BrdU (green). (E) A CNPase+ oligodendrocyte (red) in the corpus callosum, colabeled with BrdU (immunohistochemistry, shown as dark nucleus in Nomarsky). (F) Neuronal processes in the fimbria, stained with a human specific anti-70 kDa neurofilament. (G) A beta III-tubulin+ neuron (green fluorescence) in the olfactory bulb, co-labeled with BrdU (as dark nucleus (arrow) in Nomarsky). Bars=10 μm. !

L6 ANSWER 76 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10154943 IFIPAT;IFIUDB;IFICDB
TI POSTMORTEM STEM CELLS; NUTRIENT BROTH FOR USE IN PROPAGATION OF BRAIN PROGENITOR TISSUES
IN Gage Fred H; Palmer Theo D; Schwartz Philip H; Taupin Philippe
PA Unassigned Or Assigned To Individual (68000)
PI US 2002098584 A1 20020725
AI US 2001-12885 20011106
PRAI US 2000-246314P 20001106 (Provisional)
FI US 2002098584 20020725
DT Utility; Patent Application - First Publication
FS CHEMICAL
CLMN APPLICATION
GI 33
2 Figure(s).
FIG. 1A-C are bar graphs showing the percent of brain cells in a population that are immunopositive for markers for ***Neurons*** (Tuj1, NeuN), ***Astrocytes*** (glial fibrillary acidic protein (GFAP)), and Oligodendrocytes (O4). All three cell types are detectable in cultures from fetal (1A), newborn (1B) or adult (1C) brain tissues.
FIGS. 2A-C are line graphs showing the number of cells and cell doublings in primary cell cultures from fetal (2A), newborn (2B) or adult (2C) brain tissues, and reveal stable growth rates up to the point of senescence.

L6 ANSWER 77 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10124433 IFIPAT;IFIUDB;IFICDB
TI EMBRYONIC STEM CELLS AND NEURAL PROGENITOR CELLS DERIVED THEREFROM; SUCH AS NEURAL PROGENITOR CELLS CAPABLE OF GIVING RISE TO MATURE SOMATIC CELLS INCLUDING NEURAL CELLS AND/OR GLIAL CELLS RECOGNIZABLE BY EXPRESSION OF SPECIFIC MARKERS
IN Ben-Hur Tamir (IL); Pera Martin Frederick (AU); Reubinoff Benjamin Eithan (IL)
PA Unassigned Or Assigned To Individual (68000)
PI US 2002068045 A1 20020606
AI US 2001-808382 20010314
PRAI AU 2000-6211 20000314
AU 2000-1279 20001106
AU 2001-2920 20010206
FI US 2002068045 20020606
DT Utility; Patent Application - First Publication
FS CHEMICAL
CLMN APPLICATION
GI 85
30 Figure(s).
FIG. 1 shows phase contrast micrographs of ES cells and their differentiated progeny. A, inner cell mass three days after plating. B, colony of ES cells. C, higher magnification of an area of an ES cell colony. D, an area of an ES cell colony undergoing spontaneous differentiation during routine passage. E, a colony four days after plating in the absence of a feeder cell layer but in the presence of 2000 units/ml human LIF undergoing differentiation in its periphery. F, neuronal cells in a high density culture. Scale bars: A and C, 25 microns; B and E, 100 microns; D and F, 50 microns.
FIG. 2 shows marker expression in ES cells and their differentiated somatic progeny. A, ES cell colony showing histochemical staining for alkaline phosphatase. B, ES cell colony stained with antibody MC-813-70 recognising the SSEA-4 epitope. C, ES cell colony stained with antibody TRA1-60. D, ES cell colony stained with antibody GCTM-2. E, high density culture, cell body and processes of a cell stained with antineurofilament 68 kDa protein. F, high density culture, cluster of cells and network of processes emanating from them stained with antibody against neural cell adhesion molecule. G, high density culture, cells showing cytoplasmic filaments stained with antibody to muscle actin. H, high density culture, cell showing cytoplasmic filaments stained with antibody to desmin. Scale

FIG. 3 shows RT-PCR analysis of gene expression in ES cells and their differentiated derivatives. All panels show 1.5% agarose gels stained with ethidium bromide. A, expression of Oct-4 and b-actin in ES stem cells and high density cultures. Lane 1, 100 bpDNA ladder. Lane 2, stem cell culture, b-actin. Lane 3, stem cell culture, Oct-4. Lane 4, stem cell culture, PCR for Oct-4 carried out with omission of reverse transcriptase. Lane 5, high density culture, b-actin. Lane 6, high density culture, Oct-4. Lane 7, high density culture, PCR for Oct-4 carried out with omission of reverse transcriptase. b-actin band is 200 bp and Oct-4 band is 320 bp. B, expression of nestin and Pax-6 in neural progenitor cells that were derived from differentiating ES colonies. Left lane, 100 bp DNA ladder; lane 1, b-actin in HX 142 neuroblastoma cell line (positive control for nestin PCR) ; lane 2, b-actin in neural progenitor cells; lane 3, nestin in HX 142 neuroblastoma cell line; lane 4, nestin in neural progenitor cells; lane 5, nestin PCR on same sample as lane 4 without addition of reverse transcriptase; lane 6, Pax-6; lane 7, Pax-6 PCR on same sample as line 6 without addition of reverse transcriptase. Nestin band is 208 bp, Pax-6 is 274 bp. C, expression of glutamic acid decarboxylase in cultures of ***neurons***. Left lane, 100 bp DNA ladder; lane 1, b-actin; lane 2, b-actin PCR on same sample as lane 1 without addition of reverse transcriptase; lane 3, glutamic acid decarboxylase; lane 4 glutamic acid decarboxylase on same sample as lane 3 without addition of reverse transcriptase. Glutamic acid decarboxylase band is 284 bp. D, expression of GABA A alpha 2 receptor. Left lane, 100 bp DNA ladder; lane 1, b-actin; lane 2, GABA A alpha 2 receptor; lane 3, PCR without addition of reverse transcriptase. GABA A alpha 2 receptor subunit band is 471 bp.

FIG. 4 shows histology of differentiated elements found in teratomas formed in the testis of SCID mice following inoculation of HES-1 or HES-2 colonies. A, cartilage and squamous epithelium, HES-2. B, neural rosettes, HES-2. C, ganglion, gland and striated muscle, HES-1. D, bone and cartilage, HES-1. E, glandular epithelium, HES-1. F, ciliated columnar epithelium, HES-1. Scale bars: A-E, 100 microns; F, 50 microns.

FIG. 5 shows phase contrast microscopy and immunochemical analysis of marker expression in neural progenitor cells isolated from differentiating ES cultures. A, phase contrast image of a sphere formed in serum-free medium. B-D, indirect immunofluorescence staining of spheres, 4 hours after plating on adhesive substrate, for N-CAM, nestin, and vimentin respectively. In C and D, cells at the base of the sphere were placed in plane of focus to illustrate filamentous staining; confocal examination revealed that cells throughout the sphere were decorated by both antibodies. Scale bar is 100 microns in all panels.

FIG. 6 shows phase contrast appearance and marker expression in cultures of ***neurons*** derived from progenitor cells shown in FIG. 5. A, phase contrast micrograph of differentiated cells emanating from a sphere plated onto adhesive surface. B-H, indirect immunofluorescence microscopy of differentiated cells decorated with antibodies against 200 kDa neurofilament protein (B), 160 kDa neurofilament protein (C), MAP2a+b (D), glutamate (E), synaptophysin (F), glutamic acid decarboxylase (G) and beta-tubulin (H). Scale bars: A, ;B, 100 microns; C, 200 microns; D, 20 microns; E and F, 10 microns; G, 20 microns; H, 25 microns.

FIG. 7 shows neural precursors proliferating as a monolayer on a plastic tissue culture dish in the presence of EGF and ***bFGF***. These monolayer cultures of proliferating cells were obtained after prolonged cultivation (2-3 weeks) of the spheres in the presence of growth factors without sub-culturing.

FIG. 8 shows phase contrast appearance of a culture consisting of differentiated neural cells.

FIG. 9 shows phase contrast appearance of a sphere that is formed 72 hours after the transfer of a clump of undifferentiated ES cells into serum free medium (Scale bar 100 microns).

FIG. 10 shows linear correlation between the volume of spheres and the number of progenitor cells within a sphere. Spheres of various diameters that were generated from differentiating ES colonies and were propagated for 14-15 weeks were dissociated into single cell suspension and the number of cells per sphere was counted.

FIG. 11 shows indirect immunofluorescence staining of a sphere, 4 hours after plating on adhesive substrate, for N-CAM. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of the resulting spheres for 5 passages. (Scale bar 100 microns).

FIG. 12 shows indirect immunofluorescence membranous staining for N-CAM of single cells at the periphery of a sphere 4 hours after plating on adhesive substrate. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of the

FIG. 13 shows indirect immunofluorescence staining of a spheres 4 hours after plating on adhesive substrate for the intermediate filament nestin. Cells at the base of the sphere were placed in plane of focus to illustrate filamentous staining. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of resulting spheres for 5 passages. (Scale bar 25 microns).

FIG. 14 shows indirect immunofluorescence microscopy of a differentiated cell decorated with antibodies against the oligodendrocyte progenitor marker 04. (Scale bar 12.5 microns).

FIG. 15 shows indirect immunofluorescence staining of a sphere 4 hours after plating on adhesive substrate for the intermediate filament vimentin. Cells at the base of the sphere were placed in plane of focus to illustrate filamentous staining. The sphere was generated by direct transfer of undifferentiated ES cells into serum free medium and propagation of resulting spheres for 7 passages. (Scale bar 25 microns).

FIG. 16 shows the growth pattern of spheres that were generated directly from undifferentiated ES cells. Each bar represents the mean (+-SD) increment in volume per week of 24 spheres at first to twelve weeks after derivation. A more excessive growth rate is evident during the first 5 weeks.

FIG. 17 shows persistent growth in the volume of spheres along time. Each bar represents the mean (+-SD) increment in volume per week of 24 spheres at nine to twenty one weeks after derivation. The spheres were generated from differentiating ES colonies.

FIG. 18 shows linear correlation between the volume of spheres and the number of progenitor cells within a sphere. Spheres of various diameters, that were generated directly from undifferentiated ES cells and were propagated 5-7 weeks, were disaggregated into single cell suspension and the number of cells per sphere was counted.

FIG. 19 shows RT-PCR analysis of gene expression in ES cells (a week after passage) and neural spheres derived from differentiating colonies and directly from undifferentiated ES cell. All panels show 2% agarose gels stained with ethidium bromide. Lanes 1, 2 and 3, Oct-4 in ES cell culture, neural spheres derived from differentiating colonies, neural spheres derived from undifferentiated ES cells. Lane 4, stem cell culture, PCR for Oct-4 carried out with omission of reverse transcriptase. Lanes 5, 6, and 7, nestin in ES cell culture, neural spheres derived from differentiating colonies, neural spheres derived from undifferentiated ES cells. Lane 8, stem cell culture, PCR for nestin carried out with omission of reverse transcriptase. Lanes 9, 10 and 11, Pax-6 in ES cell culture, neural spheres derived from differentiating colonies, neural spheres derived from undifferentiated ES cells. Lane 12, stem cell culture, PCR for Pax-6 carried out with omission of reverse transcriptase. Lane 13, 100 bp DNA ladder. Oct-4 band is 320 bp, nestin is 208 bp and Pax-6 is 274 bp.

FIG. 20 shows indirect immunofluorescence microscopy of differentiated ***astrocyte*** cells decorated with antibody against GFAP. (Scale bar 25 microns).

FIG. 21 shows indirect immunofluorescence microscopy of brain sections of two mice (A and B) 4 weeks after transplantation of human neural precursors prelabeled with BrDU. Cells with a nucleus decorated with anti BrDU (brown stain, black arrow) are evident near the ventricular surface (white arrow indicate mouse unstained nuclei, bar=20 microns).

FIG. 22 shows indirect immunofluorescence microscopy of brain sections of a mice 4 weeks after transplantation of human neural precursors prelabeled with BrDU. Wide spread distribution of transplanted human cells decorated by anti BrDU antibodies is evident in the periventricular areas. The periventricular area in A is demonstrated at a higher magnification in B and C. (Bars=150, 60 and 30 microns in A, B and C).

FIG. 23 shows indirect immunocytochemical microscopy of brain sections of a mice 4 weeks after transplantation of human neural precursors prelabeled with BrDU. The transplanted human cells are migrating along the rostral migratory stream (bar=150 microns).

FIG. 24 shows RT-PCR analysis of gene expression in neural spheres derived from differentiating (A) and undifferentiated (B) ES cells. All panels show 2% agarose gels stained with ethidium bromide. Lanes 1 and 10, 100 bpDNA ladder; Lane 2, CD34; Lane 3, Flk-1; lane 4, HNF-3; lane 5, alfafetoprotein. Lanes 6-9 PCR reaction on the same samples as lanes 2-5 carried out with the omission of reverse transcriptase. CD-34 band is 200 bp, Flk-1 is 199, HNF-3 is 390, AFP is 340 bp.

FIG. 25 shows by RT-PCR analysis the expression of GFAP and the plp gene in differentiated cells from neural spheres derived from differentiating ES cell colonies. The expression of GFAP indicates differentiation into ***astrocytes*** while the presence of both dm-20 and plp transcripts indicate that differentiation into oligodendrocyte cells has occurred.

differentiated spheres that were independently derived from ES cells. Lane 1 and 8, 100 bp DNA ladder; Lanes 2 and 4, GFAP; lanes 3 and 5, plp and dm-20; lanes 6 and 7, PCR reaction on the same samples as lanes 3 and 5 carried out with the omission of reverse transcriptase. GFAP band is 383, plp band is 354 bp and dm-20 is 249 bp.

FIG. 26 shows a dark field stereomicroscopic photograph of areas (arrows) destined to give rise to neural precursors in a differentiating ES cell colony 3 weeks after passage (bar=1.6 mm).

FIG. 27 shows indirect immunochemical analysis of marker expression in cultures of ***neurons*** derived from progenitor cells that were derived directly from undifferentiated ES cells: A, indirect immunofluorescence microscopy of neurites decorated with antibody against 160 kDa neurofilament protein. B and C, indirect immunofluorescence staining of differentiated cells for MAP2a+b and beta-tubulin III. Scale bars: A 100 microns, B and C 10 microns.

FIG. 28 shows indirect immunochemical analysis of the expression of tyrosine hydroxylase. Neurites (A) and a differentiated cell (B) are decorated with antibodies against tyrosine hydroxylase. Scale bars: 30 microns.

FIG. 29 shows in vivo differentiation into ***astrocyte*** cells of transplanted human neural progenitors prelabeled with BrDU. Donor cells are identified by indirect immunochemical detection of BrDU (dark nuclei, arrows). Dual staining demonstrates donor cells decorated by anti GFAP (orange). Transplanted cells are migrating into the brain parenchyma (white arrow) and are also found in the periventricular zone (dark arrow) (A), A higher magnification of cells that have differentiated into ***astrocytes*** and migrated into the host brain (B).

FIG. 30 shows in vivo differentiation into oligodendrocyte cells of transplanted human neural progenitors prelabeled with BrDU. Donor cells are identified by indirect immunochemical detection of BrDU (dark nuclei, arrows). Dual staining demonstrates donor cells decorated by anti CNPase (orange). !

L6 ANSWER 78 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10121266 IFIPAT;IFIUDB;IFICDB
TI STABLE ***NEURAL*** ***STEM*** ***CELL*** LINES; GENERATING
STABLE HUMAN AGGREGATES IN VITRO; PREPARE CULTURE NEURONAL STEM CELLS,
TRANSFORM CELL, INCUBATE WITH MITOGEN, RECOVER STABLE AGGREGATES
IN Joha Karl K; Yang Renji
PA Unassigned Or Assigned To Individual (68000)
PI US 2002064873 A1 20020530
AI US 2002-47352 20020114
RLI US 1999-398897 19990920 CONTINUATION PENDING
US 1996-719450 19960925 CONTINUATION-IN-PART GRANTED
US 1998-53414 19980401 CONTINUATION-IN-PART ABANDONED
PRAI US 1998-101354P 19980922 (Provisional)
FI US 2002064873 20020530
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 22
GI 21 Figure(s).

FIG. 1. Arrangement of pMycER retrovirus plasmid. A linearized EcoR1 fragment containing the human c-myc gene fused to the ligand binding domain of the human estrogen receptor gene (Eiler et al., 1989, Nature 340: 60-68) was ligated downstream of the 5'LTR of PLXSN retroviral expression plasmid (Clontech). The final construct also contains a selectable marker, the neomycin resistance gene, Neo', under the SV40 promoter, Psv40.

FIG. 2. Growth capacity of MycER-modified human CNS stem cells. In order to measure the growth rate and capacity, a MycERmodified human CNS stem cell line pool (HK18.2) derived from 18week old human fetal cortical tissue was continuously expanded in culture for approximately 80 days. At each passage (solid circle), the cells were harvested, counted, and a fraction replated into new plates. This process was repeated for 12 passages. By dividing the increased cell number from the initial seeding density to the time of harvest by the duration of the culture per passage, an approximate doubling time was estimated (open triangle). The dotted line across the graph represents the averaged doubling time for the entire culture period. Cumulative expansion of the cells was calculated by multiplying the multiples of increased cell number at each passage and expressed as "Cumulative Fold-Expansion" over the initial cell number at day 0. The initial starting cell number at day 0 was 5.0 x 10⁶ cells.

FIG. 3. Stability of neuronal differentiation of MycER-modified human CNS

- A. Unmodified CNS stem cells differentiated and immunostained with anti-MAP2ab antibody;
- B. Unmodified CNS stem cells differentiated and immunostained with anti-TH antibody;
- C. MycER modified human cortical cells at passage 4, differentiated and immunostained with anti-MAP2ab antibody viewed at low magnification;
- D. MycER modified human cortical cells at passage 4, differentiated and immunostained with anti-MAP2ab antibody viewed at high magnification;
- E. MycER modified human cortical cells at passage 4, differentiated and immunostained with anti-TH antibody viewed at low magnification;
- F. MycER modified human cortical cells at passage 4, differentiated and immunostained with anti-TH antibody viewed at high magnification;
- G. MycER modified human cortical cells at passage 4, differentiated and immunostained with anti-GABA antibody viewed at low magnification;
- H. MycER modified human cortical cells at passage 4, differentiated and immunostained with anti-GABA antibody viewed at high magnification;
- I. MycER modified human cortical cells at passage 9, differentiated and immunostained with anti-MAP2ab antibody viewed at low magnification;
- J. MycER modified human cortical cells at passage 9, differentiated and immunostained with anti-MAP2ab antibody viewed at high magnification;
- K. MycER modified human cortical cells at passage 9, differentiated and immunostained with anti-TH antibody viewed at low magnification; and
- L. MycER modified human cortical cells at passage 9, differentiated and immunostained with anti-TH antibody viewed at high magnification.

FIG. 4. Stability of neuronal differentiation. MycER-modified human cortical cell lines were differentiated at passage 4 and at passage 11. The number of ***neurons*** immunostained for MAP2ab or TH proteins were quantified and their proportions over the total cells are reported.

FIG. 5. MycER modified neuronal progenitors.

- A. MycER-modified rat striatal progenitors immunostained with anti-tau antibody;
- B. Morphology and arrangement of tau+/TuJ1-neuronal progenitors, immunostained with anti-tau antibody;
- C. Morphology and arrangement of tau+/TuJ1+neuronal progenitors, immunostained with anti-tau antibody; and
- D. Morphology and arrangement of tau+/TuJ1+neuronal progenitors of C, immunostained with anti-TuJ1 antibody.

L6 ANSWER 79 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
 AN 10088231 IFIPAT;IFIUDB;IFICDB
 TI ENRICHED CENTRAL NERVOUS SYSTEM STEM CELL AND PROGENITOR CELL
 POPULATIONS, AND METHODS FOR IDENTIFYING, ISOLATING AND ENRICHING FOR
 SUCH POPULATIONS; COMPLEXING WITH MONOCLONAL ANTIBODIES
 IN Buck David W; Uchida Nobuko; Weissman Irving
 PA Unassigned Or Assigned To Individual (68000)
 PI US 2002031792 A1 20020314
 AI US 2001-927012 20010809
 RLI US 1999-422844 19991021 DIVISION PENDING
 PRAI US 1999-119725P 19990212 (Provisional)
 FI US 2002031792 20020314
 DT Utility; Patent Application - First Publication
 FS CHEMICAL
 CLMN APPLICATION
 GI 43
 8 Figure(s).

FIG. 1 is a diagram illustrating the proliferation and differentiation of a NS-IC.

FIG. 2 is a series of photographs showing that neurosphere cultures can be initiated from single-cell sorted 5F3+ cells.

FIG. 3 is a dot plot of fluorescence activated cell sorting (FACS) data showing the isolation of human CNS ***neural*** ***stem*** ***cells*** using cell surface markers using the monoclonal antibody 5E12. The x axis represents cell staining for antibodies to CD34 and CD45. The y axis represents cell staining with the 5E12 antibody.

FIG. 4 is a two panel dot plot of FACS sorting data showing the isolation of human ***neural*** ***stem*** ***cells*** by cell surface markers. Panel A shows that 5F3+ cells co-express the antigen for the 5E12 antibody. Panel B shows that 5F3+ cells typically do not express the antigen for the 8G1 antibody.

FIG. 5 is a chart showing the distribution of 5F3+ cells in fetal brain as a function of gestational age.

FIG. 6 is a series of photographs showing results of the transplantation of human neural cells into NOD SCID mouse.

FIG. 7 is a series of photographs showing that the progeny of 5F3+ sorted cells migrate through the rostral migratory stream (RMS) when

FIG. 8 is a series of photographs showing that the progeny of 5F3+ sorted cells migrate through the (RMS) into the olfactory bulb when transplanted into a rodent model.

L6 ANSWER 80 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 10043964 IFIPAT;IFIUDB;IFICDB
TI ENRICHED CENTRAL NERVOUS SYSTEM STEM CELL AND PROGENITOR CELL POPULATIONS, AND METHODS FOR IDENTIFYING, ISOLATING AND ENRICHING FOR SUCH POPULATIONS; CONTACTING NEURAL CELLS WITH A REAGENT THAT RECOGNIZES A DETERMINANT ON A CELL SURFACE MARKER RECOGNIZED BY MONOCLONAL ANTIBODY AC133 OR 5E12; SELECTING CELLS WHERE THERE IS CONTACT BETWEEN REAGENT AND DETERMINANT
IN Buck David W (GB); Uchida Nobuko; Weissman Irving
PA Unassigned Or Assigned To Individual (68000)
PI US 2001044122 A1 20011122
AI US 2001-792098 20010223
RLI US 1999-422844 19991021 CONTINUATION-IN-PART
PRAI US 1999-119725P 19990212 (Provisional)
FI US 2001044122 20011122
DT Utility; Patent Application - First Publication
FS CHEMICAL
CLMN APPLICATION
GI 48

8 Figure(s).

FIG. 1 is a diagram illustrating the proliferation and differentiation of a NS-IC.

FIG. 2 is a series of photographs showing that neurosphere cultures can be initiated from single-cell sorted 5F3+ cells.

FIG. 3 is a dot plot of fluorescence activated cell sorting (FACS) data showing the isolation of human CNS ***neural*** ***stem*** ***cells*** using cell surface markers using the monoclonal antibody 5E12. The x axis represents cell staining for antibodies to CD34 and CD45. The y axis represents cell staining with the 5E12 antibody.

FIG. 4 is a two panel dot plot of FACS sorting data showing the isolation of human ***neural*** ***stem*** ***cells*** by cell surface markers. Panel A shows that 5F3+ cells co-express the antigen for the 5E12 antibody. Panel B shows that 5F3+ cells typically do not express the antigen for the 8G1 antibody.

FIG. 5 is a chart showing the distribution of 5F3+ cells in fetal brain as a function of gestational age.

FIG. 6 is a series of photographs showing results of the transplantation of human neural cells into NOD SCID mouse.

FIG. 7 is a series of photographs showing that the progeny of 5F3+ sorted cells migrate through the rostral migratory stream (RMS) when transplanted into a rodent model.

FIG. 8 is a series of photographs showing that the progeny of 5F3+sorted cells migrate through the (RMS) into the olfactory bulb when transplanted into a rodent model.

L6 ANSWER 81 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 04113010 IFIPAT;IFIUDB;IFICDB
TI CULTURES OF HUMAN CNS ***NEURAL*** ***STEM*** ***CELLS***
IN Carpenter Melissa
PI US 6777233 B2 20040817
AI US 2002-134234 20020429
RLI US 2000-486302 20001016 CONTINUATION 6498018
US 1997-926313 19970905 CONTINUATION-IN-PART 5968829
FI US 6777233 20040817
US 6498018
US 5968829
DT Utility; Granted Patent - Utility, with Pre-Grant Publication
FS CHEMICAL
CLMN GRANTED
GI 2

4 Drawing Sheet(s), 7 Figure(s).

FIG. 1 shows a representation of spheres of proliferating 9FBr human ***neural*** ***stem*** ***cells*** (passage 6) derived from human forebrain tissue.

FIG. 2, Panel A, shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 6.5Fbr cultured in (a) defined media containing EGF, FGF and leukemia inhibitory factor ("LIF") (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds); Panel B shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 9Fbr cultured in (a) defined media containing EGF, FGF and LIF (shown as

diamonds); Panel C shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 9.5Fbr cultured in (a) defined media containing EGF, FGF and LIF (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds); Panel D shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 10.5Fbr cultured in (a) defined media containing EGF, FGF and leukemia inhibitory factor ("LIF") (shown as closed diamonds), and (b) the same media but without LIF (shown as open diamonds).

FIG. 3 shows a growth curve for a human ***neural*** ***stem*** ***cell*** line designated 9Fbr cultured in (a) defined media containing EGF and basic fibroblast growth factor ("***bFGF***") (shown as open diamonds), and (b) defined media with EGF but without ***bFGF*** (shown as closed diamonds).

FIG. 4 shows a graph of cell number versus days in culture for an Mx-1 conditionally immortalized human glioblast line derived from a human ***neural*** ***stem*** ***cell*** line. The open squares denote growth in the presence of interferon, the closed diamonds denote growth in the absence of interferon.

L6 ANSWER 82 OF 305 IFIPAT COPYRIGHT 2004 IFI on STN
AN 04006348 IFIPAT;IFIUDB;IFICDB
TI ENGRAFTABLE HUMAN ***NEURAL*** ***STEM*** ***CELLS***;
PRIMORDIAL HUMAN ***NEURAL*** ***STEM*** ***CELL*** CLONE
IN COMPRISING BOTH EPIDERMAL- AND FIBROBLAST GROWTH FACTOR RECEPTORS; GENE
PA EXPRESSION, GENETIC ENGINEERING AND CELLULAR DIFFERENTIATION
Kim Seung U (CA); Snyder Evan Y; Wolfe John H
British Columbia, University of CA
Children's Medical Center Corp The
Pennsylvania, University of
(10709, 11738, 64664)
PI US 6680198 B1 20040120
AI US 1999-398299 19990920
RLI US 1998-133873 19980814 CONTINUATION 5958767
FI US 6680198 20040120
US 5958767
DT Utility; Granted Patent - Utility, no Pre-Grant Publication
FS CHEMICAL
GRANTED
CLMN 2
GI 9 Drawing Sheet(s), 53 Figure(s).

FIGS. 1A and 1B: The monoclonal nature of each putative human ***neural*** ***stem*** ***cell*** (NSC) clone is confirmed by demonstrating a single retroviral insertion site within the genomes of each. (A) Genomic DNA from the putative human NSC clone H1 (which was propagated in ***bFGF*** and subsequently transduced with a retrovirus encoding lacZ and neo) was digested with Hind III (which cuts only once within the provirus) and incubated with a radiolabeled nucleotide probe complementary to neo. Monoclonal derivation is confirmed by the presence of a single integrated retrovirus with an integration site common to all cells in the colony indicating that they were derived from a single infected "parent" cell (arrow). As a positive control, the murine NSC clone C17.2 which contains 2 integrated retroviruses encoding neo (one from an integrated vmyc-encoding retrovirus and one from a separate lacZ-encoding retrovirus^{13,28} appropriately shows 2 bands (arrows). Specificity of the probe is demonstrated by the negative control, the human medulloblastoma cell line DaOY, which, having not been infected with a retrovirus, shows no neo sequences in its genome and hence no hybridization product (B) Genomic DNA from putative clones H9, H6, D10, and C2 (human NSC colonies propagated in ***bFGF*** and/or EGF and then subsequently infected with a retrovirus encoding the propagating gene vmyc) were digested with Bgl II or Bam HI (each of which cuts only once within the provirus) and then subjected to Southern analysis utilizing a probe complementary to the proviral vmyc. Single retroviral integration sites are appreciated in all colonies confirming the monoclonal nature of each putative clone. The murine NSC clone C17.2, which contains a single copy of vmyc^{13,28} and serves as a positive control, also has one band. As in (A), the negative control non-virally infected human DaOY cells, have no bands.

FIGS. 2A-2E: Characterization of human ***neural*** ***stem*** ***cells*** (NSCs) in vitro. (A) NSCs tend to grow as clusters in serum-free bFGFsupplemented medium. They differentiate spontaneously into neurofilament-immunoreactive ***neurons*** (B) or CNPaseimmunoreactive oligodendrocytes (C) when transferred to serumcontaining medium, or into GFAP-expressing ***astrocytes*** when

human-specific anti-GFAP antibody) as, for example in (D), illustrating a typical type-1 protoplasmic ***astrocyte***. Hence, a single clone has the potential for generating cells of all neural lineages ("multipotency"). New immature, undifferentiated, vimentin-immunoreactive NSCs (E) are present in clones under all conditions, suggesting the ability of a clone to "self-renew" (i.e., produce new multipotent NSCs).

FIGS. 3A-3N: Human ***neural*** ***stem*** ***cells***. (NSCs) are capable of complementing a prototypical gene product deficiency (e.g., beta-hexosaminidase-A) in neural cells of multiple lineages in which the gene is mutated (e.g., brain cells from Tay-Sachs mice). As a proof of principle that human NSCs (like murine NSCs) are capable of cross-correcting a neurogenetic defect, neural cells from the brains of mice with the prototypical neurogenetic disorder Tay-Sachs disease, generated via targeted mutagenesis of the alpha-subunit of beta-hexosaminidase resulting in absence of hexosaminidase-A39, were exposed to secreted gene products from human NSCs to assess their ability to effect complementation of the defect. (A-C) Hexosaminidase activity as determined by NASBG histochemistry (Nomarski optics). Functional hexosaminidase produces a red-pink precipitate with an intensity proportional to the level of activity. (A) Tay-Sachs neural cells (arrows) not exposed to NSCs have no, or minimal, detectable hexosaminidase. (A small number of faintly pink NASBG+ cells are occasionally observed reflecting low residual hexosaminidase-B activity). In comparison, Tay-Sachs neural cells exposed to secretory products from murine NSCs (e.g., clone C17.2H) (B) or from human NSCs (C) now stain intensely red (wildtype intensity) suggesting that they have been cross-corrected, i.e., have internalized significant amounts of functionally active hexosaminidase from the NSC-conditioned medium. (D-L) To help determine which neural cell types from the Tay-Sachs brain were cross-corrected, primary dissociated Tay-Sachs neural cells which had been co-cultured in a transwell system with human NSCs (as in (C)) were reacted both with a fluorescein-labeled antibody to the human alphasubunit of hexosaminidase (D-F) and with antibodies to neural cell type-specific antigens (visualized by a TR-tagged secondary antibody) (G-I, respectively). Photomicroscopy through a dual filter confirmed co-localization of the alphasubunit with the cell-type markers (J-L, respectively). A subset of these now alpha-subunit-positive corrected cells (D) were ***neurons***, as indicated by their expression of the neuronal marker NeuN (G,J); a subset of the alpha-subunit+ cells (E) were glial, as illustrated by their co-expression of the glial marker GFAP (H,K); and a subset of the alpha-subunit+ cells (F) were immature, undifferentiated CNS precursors, as indicated by the presence of the intermediate filament nestin (I,L). (Untreated cells from a Tay-Sachs brain do not stain for the alpha-subunit). (M) Percentage of successfully rescued (i.e., NASBG+) primary Tay-Sachs neural cells as seen in (A-C). The number of "untreated" Tay-Sachs alpha-subunit-null cells (-/-) (i.e., unexposed to NSCs) that were NASBG+ (1st histogram) was quite low. (That the percentage is not 0 reflects some low residual hexosaminidase-B activity in mutant cells that is sometimes sufficient enough in some cells to produce a pale pink scoreable cell). In contrast, among Tay-Sachs neural cells "treated" with secretory products from murine NSCs (C17.2) (2nd histogram), murine NSCs engineered to over-express hexosaminidase (C17.2H) (3rd histogram), or human NSCs (4th histogram), the percentage of cross-corrected, hexosaminidase-containing cells was significantly increased ($p < 0.01$). The NSCs did not significantly differ from each other in their ability to effect this rescue. (NASBG staining of neural cells from a wildtype mouse served as a positive control and were nearly 100% NASBG+, histogram not presented).

(N) Complementation of gene product deficiency results in rescue of a pathologic phenotype in mutated neural cells, as illustrated by percentage of Tay-Sachs CNS cells with diminished GM2 accumulation. Among Tay-Sachs cells not exposed to NSCs (1st histogram), the percentage of GM2+ cells was large reflecting their pathologically high level of storage and consistent with a lack of enzyme as per (M). In contrast, the percentage of cross-corrected Tay-Sachs cells without detectable GM2 storage following exposure to murine (2nd and 3rd histograms, as in (M)) or human NSCs (4th histogram) was significantly lower than in the mutant ($p < 0.01$), approaching that in wildtype (+/+ mouse brain (5th histogram)). Again, the NSCs did not significantly differ from each other in their ability to effect this rescue.

FIGS. 4A-4E: Developmentally-appropriate migration of human ***neural*** ***stem*** ***cells*** (NSCs) following engraftment into the subventricular germinal zone (SVZ) of newborn mice. (A,B) Donor-derived human NSCs integrate and intermingle nondisruptively with endogenous progenitors within the host SVZ by 24 hours after transplantation. A

highlighted in (A), has interspersed with densely packed endogenous SVZ cells, visualized by DAPI (blue) in the overlapping image in (B). (C) Two weeks following transplantation, many donor-derived cells (red) have migrated extensively within the subcortical white matter (arrow) and corpus callosum (c) from their site of implantation in the lateral ventricles (LV), as visualized in this coronal section. A representative migrating cell within the subcortical white matter (arrow), visualized at higher magnification in the boxed insert, is noted to have a leading process characteristic of migrating precursor cells. (D,E) As seen in this representative cresyl violet-counterstained parasagittal section, other donor-derived cells migrated from their integration site in the anterior SVZ to enter the rostral migratory stream ("RMS") leading to the olfactory bulb ("OB"). Representative BrdU-immunoperoxidase-positive (brown) donor-derived cells (arrow) within the RMS, are seen at low power in (D) and visualized at higher magnification in (E), intermixed with migrating host cells. Further characterization and visualization of these donor human NSC-derived cells in their final location in the OB are presented in FIG. 5. Scale Bars: 100 μm.

FIGS. 5A-5Q: Differentiation and disseminated foreign gene (beta-galactosidase) expression of human ***neural*** ***stem*** ***cell*** (NSC) clones in vivo following engraftment into the SVZ of developing, neonatal mice. (A-C) Stably engrafted, beta-galactosidase (beta gal)-expressing, donor-derived cells from representative human NSC clone H1, detected with Xgal histochemistry (A,B) and with anti-beta gal ICC (C). The donor-derived cells pictured in the series of photomicrographs in (A) are within the periventricular and subcortical white matter regions (as per FIG. 4). (The top and bottom panels-low power on the left, corresponding high power on the right-are from representative semi-adjacent regions within a single recipient, suggesting a significant distribution of cells; arrows indicate the lateral ventricles). Furthermore, as illustrated in (B,C) by representative high power photomicrographs through the olfactory bulb (OB) (located as in FIG. 4D), donor-derived cells from this clone have not only migrated extensively to this developmentally-appropriate site, but continue to express beta gal in this distant location (i.e., in a disseminated fashion in vivo). The normal fate of a subpopulation of SVZ-derived progenitors that have migrated to the OB at this developmental stage is to become neuronal. In (D-G), donor-derived ***neurons*** in the mature OB, derived from BrdU-labeled NSCs (representative clone H6) implanted into the SVZ at birth, are identified by both their immunoreactivity to a human-specific NF antibody (D) as well as their expression of the mature neuronal marker, NeuN (E-G); under confocal microscopy, a BrdU+ (hence, donor-derived) cell (arrow in (E), fluorescein) is NeuN+ (arrow in (F), Texas Red) appreciated best with a dual filter (arrow in (G)). Adjacent to this representative donor-derived BrdU+/NeuN+ neuron (arrow), are 2 host OB ***neurons*** (BrdU/NeuN+ in (G)) which share a similar size, morphology, and location with the donor-derived cell (arrow in F). (H,I) High power view of a representative donor-derived (clone H6) oligodendrocyte (arrow), appropriately in the adult subcortical white matter (as per FIG. 4C) following neonatal intraventricular implantation, double-labeled with an antibody to the oligodendrocyte-specific protein CNPase (H) and BrdU (I). Characteristic cytoplasmic processes extending from the soma are noted (arrowhead in (H)). (The morphology of the CNPase+ cell has been somewhat damaged by the HCl pre-treatment required for BrdU double-labeling). (J) Mature donor-derived ***astrocytes*** (clone H6) in the adult subcortical white matter (arrow) (as per FIG. 4C) and striatum following neonatal intraventricular implantation, identified with a human-specific anti-GFAP antibody. The inset better illustrates at higher magnification the characteristic mature astrocytic morphology of a representative human-GFAP+ cell. (K-Q) Expression of vmyc is downregulated within 48 hours following engraftment. (K), (M), and (O) are DAPI-based nuclear stains of the adjacent panels (L), (N), and (P, Q), respectively. Representative human NSC clone H6 was generated (as was the well-characterized murine NSC clone C17.2) with the propagating gene vmyc. vmyc immunoreactivity in H6-derived cells (red) in the SVZ (arrows) at 24 hours following engraftment ((L) and at higher power in (N)), is persistently absent (P) in integrated H6-derived cells (visualized by BrdU labeling in (Q) (shown here 3 weeks following transplantation, but representative of any point 24 hours after engraftment). Scale Bars: (A), (K) and applies to (L): 100 μm; (D), (E) and applies to (F,G), (H) and applies to (I), (J), (M) and applies to (N): 10 μm; (O) and applies to (P,Q): 50 μm

FIGS. 6A-6J: Neuronal replacement by human ***neural*** ***stem*** ***cells*** (NSCs) following transplantation into the cerebellum of t1

neurodegeneration. (A-G) BrdU-intercalated, donor-derived cells (from representative clone H6) identified in the mature cerebellum by anti-BrdU immunoperoxidase cytochemistry (brown nuclei) following implantation into the neonatal mouse external germinal layer (EGL). (The EGL, on the cerebellar surface, disappears as the internal granule layer (IGL) emerges to become the deepest cerebellar cortical layer at the end of organogenesis¹³) (A) Clone H6-derived cells are present in the IGL ("igl"; arrowheads) of all lobes of the mature cerebellum in this parasagittal section. (Granule ***neurons*** are diminished throughout the cerebellum with some prominence in the anterior lobe). (B) Higher magnification of the representative posterior cerebellar lobe indicated by arrowhead "b" in (A), demonstrating the large number of donor-derived cells present within the recipient IGL. (C-G) Increasing magnifications of donor-derived cells (brown nuclei) within the IGL of a mouse anterior cerebellar lobe. (Different animal from that in (A,B).) (G) Normarski optics bring out the similarity in size and morphology of the few residual host, BrdU-negative cerebellar granule ***neurons*** (arrowheads) and a BrdU+, donor-derived neuron (arrow), which is representative of those seen in all engrafted lobes of all animals.) (H,I) Confirmation of the neuronal differentiation of a subpopulation of the donor-derived, BrdU+ cells from (A-G) is illustrated by co-labeling with anti-BrdU (green in H) and the mature neuronal marker NeuN (red in I) (indicated with corresponding arrows). (Some adjacent, donor-derived cells are non-neuronal as indicated by their BrdU+ (arrowhead in (H)) but NeuN-phenotype (also illustrating the specificity of the immunostaining). (J) Cells within the IGL are confirmed to be human donor-derived cells by FISH with a human-specific probe (red) identifying human chromosomal centromeres. Scale Bars: (A), (B): 100 μm; (F), (G), (J): 10 μm!

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 TI ENGRAFTABLE HUMAN ***NEURAL*** ***STEM*** ***CELLS*** ; STABLE
 CLONES SUITABLE FOR IMPLANTATION; USE IN GENE THERAPY
 IN Kim Seung U (CA); Snyder Evan Y; Wolfe John H
 PA British Columbia, University of CA
 Children's Medical Center Corp The
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 RLI US 1998-133873 19980814 CONTINUATION 5958767
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FIGS. 1A and 1B: The monoclonal nature of each putative human ***neural*** ***stem*** ***cell*** (NSC) clone is confirmed by demonstrating a single retroviral insertion site within the genomes of each. (A) Genomic DNA from the putative human NSC clone H1 (which was propagated in ***bFGF*** and subsequently transduced with a retrovirus encoding lacZ and neo) was digested with Hind III (which cuts only once within the provirus) and incubated with a radiolabeled nucleotide probe complementary to neo. Monoclonal derivation is confirmed by the presence of a single integrated retrovirus with an integration site common to all cells in the colony indicating that they were derived from a single infected "parent" cell (arrow). As a positive control, the murine NSC clone C17.2 which contains 2 integrated retroviruses encoding neo (one from an integrated vmyc-encoding retrovirus and one from a separate lacZ-encoding retrovirus^{13,28} appropriately shows 2 bands (arrows). Specificity of the probe is demonstrated by the negative control, the human meduloblastoma cell line DaOY, which, having not been infected with a retrovirus, shows no neo sequences in its genome and hence no hybridization product. (B) Genomic DNA from putative clones H9, H6, D10, and C2 (human NSC colonies propagated in ***bFGF*** and/or EGF and then subsequently infected with a retrovirus encoding the propagating gene vmyc) were digested with Bgl II or Bam HI (each of which cuts only once within the provirus) and then subjected to Southern analysis utilizing a probe complementary to the proviral vmyc. Single retroviral integration sites are appreciated in all colonies confirming the monoclonal nature of each putative clone. The murine NSC clone C17.2, which contains a single copy of vmyc^{13,28} and serves as a positive control, also has one band. As in (A), the negative control non-virally

FIGS. 2A-2E: Characterization of human ***neural*** ***stem*** ***cells*** (NSCs) in vitro. (A) NSCs tend to grow as clusters in serum-free bFGF-supplemented medium. They differentiate spontaneously into neurofilament-immunoreactive ***neurons*** (B) or CNPase-immunoreactive oligodendrocytes (C) when transferred to serum-containing medium, or into GFAP-expressing ***astrocytes*** when cocultured with primary murine CNS cultures (and identified with a human-specific anti-GFAP antibody) as, for example in (D), illustrating a typical type-1 protoplasmic ***astrocyte***. Hence, a single clone has the potential for generating cells of all neural lineages ("multipotency"). New immature, undifferentiated, vimentin-immunoreactive NSCs (E) are present in clones under all conditions, suggesting the ability of a clone to "self-renew" (i.e., produce new multipotent NSCs).

FIGS. 3A-3N: Human ***neural*** ***stem*** ***cells*** (NSCs) are capable of complementing a prototypical gene product deficiency (e.g., beta-hexosaminidase-A) in neural cells of multiple lineages in which the gene is mutated (e.g., brain cells from Tay-Sachs mice). As a proof of principle that human NSCs (like murine NSCs) are capable of cross-correcting a neurogenetic defect, neural cells from the brains of mice with the prototypical neurogenetic disorder Tay-Sachs disease, generated via targeted mutagenesis of the alpha-subunit of beta-hexosaminidase resulting in absence of hexosaminidase-A39, were exposed to secreted gene products from human NSCs to assess their ability to effect complementation of the defect. (A-C) Hexosaminidase activity as determined by NASBG histochemistry (Nomarski optics). Functional hexosaminidase produces a red-pink precipitate with an intensity proportional to the level of activity. (A) Tay-Sachs neural cells (arrows) not exposed to NSCs have no, or minimal, detectable hexosaminidase. (A small number of faintly pink NASBG+ cells are occasionally observed reflecting low residual hexosaminidase-B activity). In comparison, Tay-Sachs neural cells exposed to secretory products from murine NSCs (e.g., clone C17.2H) (B) or from human NSCs (C) now stain intensely red (wildtype intensity) suggesting that they have been cross-corrected, i.e., have internalized significant amounts of functionally active hexosaminidase from the NSC-conditioned medium. (D-L) To help determine which neural cell types from the Tay-Sachs brain were cross-corrected, primary dissociated Tay-Sachs neural cells which had been co-cultured in a transwell system with human NSCs (as in (C)) were reacted both with a fluorescein-labeled antibody to the human α-subunit of hexosaminidase (D-F) and with antibodies to neural cell typespecific antigens (visualized by a TR-tagged secondary antibody) (G-I, respectively). Photomicroscopy through a dual filter confirmed co-localization of the α-subunit with the celltype markers (J-L, respectively). A subset of these now α-subunit-positive corrected cells (D) were ***neurons***, as indicated by their expression of the neuronal marker NeuN (G,J); a subset of the α-subunit+cells (E) were glial, as illustrated by their co-expression of the glial marker GFAP (H,K); and a subset of the α-subunit+cells (F) were immature, undifferentiated CNS precursors, as indicated by the presence of the intermediate filament nestin (I,L). (Untreated cells from a Tay-Sachs brain do not stain for the α-subunit). (M) Percentage of successfully rescued (i.e., NASBG+) primary Tay-Sachs neural cells as seen in (A-C). The number of "untreated" Tay-Sachs α-subunit-null cells (-/-) (i.e., unexposed to NSCs) that were NASBG+ (1st histogram) was quite low. (That the percentage is not 0 reflects some low residual hexosaminidase-B activity in mutant cells that is sometimes sufficient enough in some cells to produce a pale pink scoreable cell). In contrast, among Tay-Sachs neural cells "treated" with secretory products from murine NSCs (C17.2) (2nd histogram), murine NSCs engineered to over-express hexosaminidase (C17.2H) (3rd histogram), or human NSCs (4th histogram), the percentage of cross-corrected, hexosaminidase-containing cells was significantly increased (p less-than 0.01). The NSCs did not significantly differ from each other in their ability to effect this rescue. (NASBG staining of neural cells from a wildtype mouse served as a positive control and were nearly 100% NASBG+, histogram not presented). (N) Complementation of gene product deficiency results in rescue of a pathologic phenotype in mutated neural cells, as illustrated by percentage of Tay-Sachs CNS cells with diminished GM2 accumulation. Among Tay-Sachs cells not exposed to NSCs (1st histogram), the percentage of GM2+cells was large reflecting their pathologically high level of storage and consistent with a lack of enzyme as per (M). In contrast, the percentage of cross-corrected Tay-Sachs cells without detectable GM2 storage following exposure to murine (2nd and 3rd histograms, as in (M)) or human NSCs (4th histogram) was significantly lower than in the mutant (p less than 0.01), approaching that in wildtype (+/+) mouse brain (5th

in their ability to effect this rescue.

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FIGS. 5A-5Q: Differentiation and disseminated foreign gene (beta-galactosidase) expression of human ***neural*** ***stem*** ***cell*** (NSC) clones in vivo following engraftment into the SVZ of developing, neonatal mice. (A-C) Stably engrafted, beta-galactosidase (beta gal)-expressing, donor-derived cells from representative human NSC clone H1, detected with Xgal histochemistry (A,B) and with anti-beta gal ICC (C). The donor-derived cells pictured in the series of photomicrographs in (A) are within the periventricular and subcortical white matter regions (as per FIG. 4). (The top and bottom panels-low power on the left, corresponding high power on the right-are from representative semi-adjacent regions within a single recipient, suggesting a significant distribution of cells; arrows indicate the lateral ventricles). Furthermore, as illustrated in (B,C) by representative high power photomicrographs through the olfactory bulb (OB) (located as in FIG. 4D), donor-derived cells from this clone have not only migrated extensively to this developmentally-appropriate site, but continue to express beta gal in this distant location (i.e., in a disseminated fashion in vivo). The normal fate of a subpopulation of SVZderived progenitors that have migrated to the OB at this developmental stage is to become neuronal In (D-G), donorderived ***neurons*** in the mature OB, derived from BrdU-labeled NSCs (representative clone H6 implanted into the SVZ at birth, are identified by both their immunoreactivity to a humanspecific NF antibody (D) as well as their expression of the mature neuronal marker, NeuN (E-G); under confocal microscopy, a BrdU+ (hence, donor-derived) cell (arrow in (E), fluorescein) is NeuN+ (arrow in (F), Texas Red) appreciated best with a dual filter (arrow in (G)). Adjacent to this representative donorderived BrdU+/NeuN+ neuron (arrow), are 2 host OB ***neurons*** (BrdU/NeuN+ in (G)) which share a similar size, morphology, and location with the donor-derived cell (arrow in F). (H,I) High power view of a representative donor-derived (clone H6) oligodendrocyte (arrow), appropriately in the adult subcortical white matter (as per FIG. 4C) following neonatal intraventricular implantation, double-labeled with an antibody to the oligodendrocyte-specific protein CNPase (H) and BrdU (I). Characteristic cytoplasmic processes extending from the soma are noted (arrowhead in (H)). The morphology of the CNPase+cell has been somewhat damaged by the HCl pre-treatment required for BrdU double-labeling). (J) Mature donor-derived ***astrocytes*** (clone H6) in the adult subcortical white matter (arrow) (as per FIG. 4C) and striatum following neonatal intraventricular implantation, identified with a human-specific anti-GFAP antibody. The inset better illustrates at higher magnification the characteristic mature astrocytic morphology of a representative human-GFAP+cell. (K-Q) Expression of vmyc is downregulated within 48 hours following engraftment. (K), (M), and (O) are DAPI-based nuclear stains of the adjacent panels (L), (N), and (P, Q), respectively. Representative human NSC clone H6 was generated (as was the well-characterized murine NSC clone C17.2) with the propagating gene vmyc. vmyc immunoreactivity in H6-derived cells (red) in the SVZ (arrows) at 24 hours following engraftment ((L) and at higher power in (N)), is persistently absent (P) in integrated H6-derived cells (visualized by

representative or any point 24 hours after engraftment). Scale Bars: (A), (K) and applies to (L): 100 μm; (D), (E) and applies to (F,G), (H) and applies to (I), (J), (M) and applies to (N): 10 μm; (O) and applies to (P,Q): 50 μm

FIGS. 6A-6J: Neuronal replacement by human ***neural*** ***stem*** ***cells*** (NSCs) following transplantation into the cerebellum of the granule neuron-deficient meander tail (mea) mouse model of neurodegeneration. (A-G) BrdU-intercalated, donor-derived cells (from representative clone H6) identified in the mature cerebellum by anti-BrdU immunoperoxidase cytochemistry (brown nuclei) following implantation into the neonatal mea external germinal layer (EGL). (The EGL, on the cerebellar surface, disappears as the internal granule layer (IGL) emerges to become the deepest cerebellar cortical layer at the end of organogenesis¹³) (A) Clone H6-derived cells are present in the IGL ("igl"; arrowheads) of all lobes of the mature cerebellum in this parasagittal section. (Granule ***neurons*** are diminished throughout the cerebellum with some prominence in the anterior lobe). (B) Higher magnification of the representative posterior cerebellar lobe indicated by arrowhead "b" in (A), demonstrating the large number of donor-derived cells present within the recipient IGL. (C-G) Increasing magnifications of donor-derived cells (brown nuclei) within the IGL of a mea anterior cerebellar lobe. (Different animal from that in (A,B).) (G) Normarski optics bring out the similarity in size and morphology of the few residual host, BrdU-negative cerebellar granule ***neurons*** (arrowheads) and a BrdU+, donor-derived neuron (arrow), which is representative of those seen in all grafted lobes of all animals.) (H,I) Confirmation of the neuronal differentiation of a subpopulation of the donor-derived, BrdU+ cells from (A-G) is illustrated by co-labeling with antiBrdU (green in H) and the mature neuronal marker NeuN (red in I) (indicated with corresponding arrows). (Some adjacent, donor-derived cells are non-neuronal as indicated by their BrdU+ (arrowhead in (H)) but NeuN-phenotype (also illustrating the specificity of the immunostaining). (J) Cells within the IGL are confirmed to be human donor-derived cells by FISH with a human-specific probe (red) identifying human chromosomal centromeres. Scale Bars: (A), (B): 100 μm; (F), (G), (J): 10 μm !

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TI ENGRAFTABLE HUMAN ***NEURAL*** ***STEM*** ***CELLS*** ; STABLE
CLONED CELL LINE ISOLATED FROM FETAL TELENCEPHALON; CAPABLE OF
DIFFERENTIATION TO ***NEURONS*** , OLIGODENDROCYTES AND
ASTROCYTES ; TRANSPLANTATION; GENE THERAPY
IN Kim Seung U (CA); Snyder Evan Y; Wolfe John H
PA British Columbia, University of CA
Children's Medical Center Corp The
Pennsylvania, University of
(10709, 11738, 64664)
PI US 6528306 B1 20030304
AI US 1999-398298 19990920
RLI US 1998-133873 19980814 CONTINUATION
FI US 6528306 20030304
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GI 6 Drawing Sheet(s), 53 Figure(s).

FIGS. 1A and B: The monoclonal nature of each putative human ***neural*** ***stem*** ***cell*** (NSC) clone is confirmed by demonstrating a single retroviral insertion site within the genomes of each. ((A) Genomic DNA from the putative human NSC clone H1 (which was propagated in ***bFGF*** and subsequently transduced with a retrovirus encoding lacZ and neo) was digested with Hind III (which cuts only once within the provirus) and incubated with a radiolabeled nucleotide probe complementary to neo. Monoclonal derivation is confirmed by the presence of a single integrated retrovirus with an integration site common to all cells in the colony indicating that they were derived from a single infected "parent" cell (arrow). As a positive control, the murine NSC clone C17.2 which contains 2 integrated retroviruses encoding neo (one from an integrated vmyc-encoding retrovirus and one from a separate lacZ-encoding retrovirus^{13,28} appropriately shows 2 bands (arrows). Specificity of the probe is demonstrated by the negative control, the human meduloblastoma cell line DaOY, which, having not been infected with a retrovirus, shows no neo sequences in its genome and hence no hybridization product. (B) Genomic DNA from putative clones H9,

EGF and then subsequently infected with a retrovirus encoding the propagating gene vmyc) were digested with Bgl II or Bam HI (each of which cuts only once within the provirus) and then subjected to Southern analysis utilizing a probe complementary to the proviral vmyc. Single retroviral integration sites are appreciated in all colonies confirming the monoclonal nature of each putative clone. The murine NSC clone C17.2, which contains a single copy of vmyc13.28 and serves as a positive control, also has one band. As in (A), the negative control non-virally infected human DaOY cells, have no bands.

FIGS. 2A-2E: Characterization of human ***neural*** ***stem*** ***cells*** (NSCs) in vitro. (A) NSCs tend to grow as clusters in serum-free bFGFsupplemented medium. They differentiate spontaneously into neurofilament-immunoreactive ***neurons*** (B) or CNPaseimmunoreactive oligodendrocytes (C) when transferred to serumcontaining medium, or into GFAP-expressing ***astrocytes*** when cocultured with primary murine CNS cultures (and identified with a human-specific anti-GFAP antibody as, for example in (D), illustrating a typical type-1 protoplasmic ***astrocyte***). Hence, a single one has the potential for generating cells of all neural lineages ("multipotency"). New immature, undifferentiated, vimentin-immunoreactive NSCs (E) are present in clones under all conditions, suggesting the ability of a clone to "selfrenew" (i.e., produce new multipotent NSCs).

FIGS. 3A-3N: Human ***neural*** ***stem*** ***cells*** (NSCs) are capable of complementing a prototypical gene product deficiency (e.g., beta-hexosaminidase-A) in neural cells of multiple lineages in which the gene is mutated (e.g., brain cells from Tay-Sachs mice). As a proof of principle that human NSCs (like murine NSCs) are capable of cross-correcting a neurogenetic defect, neural cells from the brains of mice with the prototypical neurogenetic disorder Tay-Sachs disease, generated via targeted mutagenesis of the alpha-subunit of beta-hexosaminidase resulting in absence of hexosaminidase-A39, were exposed to secreted gene products from human NSCs to assess their ability to effect complementation of the defect. (A-C) Hexosaminidase activity as determined by NASBG histochemistry (Nomarski optics). Functional hexosaminidase produces a red-pink precipitate with an intensity proportional to the level of activity. (A) Tay-Sachs neural cells (arrows) not exposed to NSCs have no, or minimal, detectable hexosaminidase. (A small number of faintly pink NASBG+cells are occasionally observed reflecting low residual hexosaminidase-B activity). In comparison, Tay-Sachs neural cells exposed to secretory products from murine NSCs (e. g., clone C17.2H) (B) or from human NSCs (C) now stain intensely red (wildtype intensity) suggesting that they have been cross-corrected, i.e., have internalized significant amounts of functionally active hexosaminidase from the NSCconditioned medium. (D-L) To help determine which neural cell types from the Tay-Sachs brain were cross-corrected, primary dissociated Tay-Sachs neural cells which had been co-cultured in a transwell system with human NSCs (as in (C)) were reacted both with a fluorescein-labeled antibody to the human alphasubunit of hexosaminidase (D-F) and with antibodies to neural cell type-specific antigens (visualized by a TR-tagged secondary antibody) (G-I, respectively). Photomicroscopy through a dual filter confirmed co-localization of the alphasubunit with the cell-type markers (J-L, respectively). A subset of these now alpha-subunit-positive corrected cells (D) were ***neurons***, as indicated by their expression of the neuronal marker New N (G,J); a subset of the alpha-subunit+cells (E) were glials as illustrated by their co-expression of the glial marker GFAP (H,K); and a subset of the alpha-subunit+cells (F) were immature, undifferentiated CNS precursors, as indicated by the presence of the intermediate filament nestin (I,L). (Untreated cells from a Tay-Sachs brain do not stain for the asubunit). (M) Percentage of successfully rescued (i.e., NASBG+) primary Tay-Sachs neural cells as seen in (A-C). The number of "untreated" Tay-Sachs alpha-subunit-null cells (-/-) (i.e., unexposed to NSCs) that were NASBG+(1st histogram) was quite low. (That the percentage is not 0 reflects some low residual hexosaminidase-B activity in mutant cells that is sometimes sufficient enough in some cells to produce a pale pink scoreable cell). In contrast, among Tay-Sachs neural cells "treated" with secretory products from murine NSCs (C17.2) (2nd histogram), murine NSCs engineered to over-express hexosaminidase (C17.2H) (3rd histogram), or human NSCs (4th histogram), the percentage of cross-corrected, hexosaminidase-containing cells was significantly increased (p less-than 0.01). The NSCs did not significantly differ from each other in their ability to effect this rescue. (NASBG staining of neural cells from a wildtype mouse served as a positive control and were nearly 100% NASBG+, histogram not presented). (N) Complementation of gene product deficiency results in rescue of a

percentage of Tay-Sachs CNS cells with diminished GM2 accumulation. Among Tay-Sachs cells not exposed to NSCs (1st histogram), the percentage of GM2+cells was large reflecting their pathologically high level of storage and consistent with a lack of enzyme as per (M). In contrast, the percentage of cross-corrected Tay-Sachs cells without detectable GM2 storage following exposure to murine (2nd and 3rd histograms, as in (M)) or human NSCs (4th histogram) was significantly lower than in the mutant (p less-than 0.01), approaching that in wildtype (+/+) mouse brain (5th histogram). Again, the NSCs did not significantly differ from each other in their ability to effect this rescue.

FIGS. 4A-4E: Developmentally-appropriate migration of human ***neural*** ***stem*** ***cells*** (NSCs) following engraftment into the subventricular germinal zone (SVZ) of newborn mice. (A,B) Donorderived human NSCs integrate and intermingle nondisruptively with endogenous progenitors within the host SVZ by 24 hours after transplantation. A representative donor-derived cell with a typical short process (highlighted in (A)), has interspersed with densely packed endogenous SVZ cells, visualized by DAPI (blue) in the overlapping image in (B). (C) Two weeks following transplantation, many donor-derived cells (red) have migrated extensively within the subcortical white matter (arrow) and corpus callosum (c) from their site of implantation in the lateral ventricles (LV), as visualized in this coronal section. A representative migrating cell within the subcortical white matter (arrow), visualized at higher magnification in the boxed insert, is noted to have a leading process characteristic of migrating precursor cells. (D,E) As seen in this representative cresyl violet-counterstained parasagittal section, other donorderived cells migrated from their integration site in the anterior SVZ to enter the rostral migratory stream ("RMS") leading to the olfactory bulb ("OB"). Representative BrdUimmunoperoxidase-positive (brown) donor-derived cells (arrow) within the RMS, are seen at low power in (D) and visualized at higher magnification in (E), intermixed with migrating host cells. Further characterization and visualization of these donor human NSC-derived cells in their final location in the OB are presented in FIG. 5. Scale Bars: 100 μ m.

FIGS. 5A-5Q: Differentiation and disseminated foreign gene (beta-galactosidase) expression of human ***neural*** ***stem*** ***cell*** (NSC) clones in vivo following engraftment into the SVZ of developing, neonatal mice. (A-C) Stably engrafted, beta-galactosidase (beta gal)-expressing, donor-derived cells from representative human NSC clone H1, detected with Xgal histochemistry (A,B) and with anti-beta gal ICC (C). The donorderived cells pictured in the series of photomicrographs in (A) are within the periventricular and subcortical white matter regions (as per FIG. 4). (The top and bottom panels-low power on the left, corresponding high power on the right-are from representative semi-adjacent regions within a single recipient, suggesting a significant distribution of cells; arrows indicate the lateral ventricles). Furthermore, as illustrated in (B,C) by representative high power photomicrographs through the olfactory bulb (OB) (located as in FIG. 4D), donor-derived cells from this clone have not only migrated extensively to this developmentally-appropriate site, but continue to express beta gal in this distant location (i.e., in a disseminated fashion in vivo). The normal fate of a subpopulation of SVZderived progenitors that have migrated to the OB at this developmental stage is to become neuronal.

In (D-G), donor-derived ***neurons*** in the mature OB, derived from BrdU-labeled NSCs (representative clone H6) implanted into the SVZ at birth, are identified by both their immunoreactivity to a human-specific NF antibody (D) as well as their expression of the mature neuronal marker, NeuN (E-G); under confocal microscopy, a BrdU+ (hence, donor-derived) cell (arrow in (E), fluorescein) is NeuN+ (arrow in (F), Texas Red) appreciated best with a dual filter (arrow in (G)). Adjacent to this representative donor-derived BrdU+/NeuN+neuron (arrow), are 2 host OB ***neurons*** (BrdU-/NeuN+ in (G)) which share a similar size, morphology, and location with the donor-derived cell (arrow in F). (H,I) High power view of a representative donor-derived (clone H6) oligodendrocyte (arrow), appropriately in the adult subcortical white matter (as per FIG. 4C) following neonatal intraventricular implantation, double-labeled with an antibody to the oligodendrocyte-specific protein CNPase (H) and BrdU (I). Characteristic cytoplasmic processes extending from the soma are noted (arrowhead in (H)). (The morphology of the CNPase+cell has been somewhat damaged by the HCl pre-treatment required for BrdU double-labeling). (J) Mature donor-derived ***astrocytes*** (clone H6) in the adult subcortical white matter (arrow) (as per FIG. 4C) and striatum following neonatal intraventricular implantation, identified with a human-specific anti-GFAP antibody. The inset better illustrates at

representative human-GFAP+cell. (K-Q) Expression of vmyc is downregulated within 48 hours following engraftment. (K), (M), and (O) are DAPI-based nuclear stains of the adjacent panels (L), (N), and (P, Q), respectively. Representative human NSC clone H6 was generated (as was the well-characterized murine NSC clone C17.2) with the propagating gene vmyc. vmyc immunoreactivity in H6-derived cells (red) in the SVZ (arrows) at 24 hours following engraftment ((L) and at higher power in (N)), is persistently absent (P) in integrated H6-derived cells (visualized by BrdU labeling in (Q) (shown here 3 weeks following transplantation, but representative of any point 24 hours after engraftment). Scale Bars: (A), (K) and applies to (L); 100 μm; (D), (E) and applies to (F,G), (H) and applies to (I), (J), (M) and applies to (N); 10 μm; (O) and applies to (P,Q); 50 μm

FIGS. 6A-6J: Neuronal replacement by human ***neural*** ***stem*** ***cells*** (NSCs) following transplantation into the cerebellum of the granule neuron-deficient meander tail (mea) mouse model of neurodegeneration. (A-G) BrdU-intercalated, donor-derived cells (from representative clone H6) identified in the mature cerebellum by anti-BrdU immunoperoxidase cytochemistry (brown nuclei) following implantation into the neonatal mea external germinal layer (EGL). (The EGL, on the cerebellar surface, disappears as the internal granule layer (IGL) emerges to become the deepest cerebellar cortical layer at the end of organogenesis¹³) (A) Clone H6-derived cells are present in the IGL ("igl"; arrowheads) of all lobes of the mature cerebellum in this parasagittal section. (Granule ***neurons*** are diminished throughout the cerebellum with some prominence in the anterior lobe). (B) Higher magnification of the representative posterior cerebellar lobe indicated by arrowhead "b" in (A), demonstrating the large number of donor-derived cells present within the recipient IGL. (C-G) Increasing magnifications of donor-derived cells (brown nuclei) within the IGL of a mea anterior cerebellar lobe. (Different animal from that in (A,B).) (G) Normarski optics bring out the similarity in size and morphology of the few residual host, BrdU-negative cerebellar granule ***neurons*** (arrowheads) and a BrdU+, donor-derived neuron (arrow), which is representative of those seen in all engrafted lobes of all animals.) (H, I) Confirmation of the neuronal differentiation of a subpopulation of the donor-derived, BrdU+cells from (A-G) is illustrated by co-labeling with antiBrdU (green in H) and the mature neuronal marker NeuN (red in I) (indicated with corresponding arrows). (Some adjacent, donorderived cells are non-neuronal as indicated by their BrdU+ (arrowhead in (H)) but NeuN-phenotype (also illustrating the specificity of the immunostaining). (J) Cells within the IGL are confirmed to be human donor-derived cells by FISH with a human-specific probe (red) identifying human chromosomal centromeres. Scale Bars: ((A), (B): 100 μm; (F), (G), (J): 10 μm !

L6 ANSWER 85 OF 305 JICST-EPlus COPYRIGHT 2004 JST on STN
 AN 1040648129 JICST-EPlus
 TI Simple procedure for production of ***neural*** ***stem*** ***cells*** and ***neurons*** from embryonic stem cells
 AU NAKAYAMA T; MOMOKI-SOGA T; INOUE N
 YAMAGUCHI K
 SUZUKI Y; KONDO Y
 SAI T
 CS Yokohama City Univ. Sch. Medicine, Yokohama, Jpn
 Riken, Wako, Jpn
 Tanabe Seiyaku Co., Ltd., Osaka, Jpn
 Jikei Univ. Sch. Medicine, Tokyo, Jpn
 SO Shinkei Kagaku (Bulletin of the Japanese Society for Neurochemistry), (2004) vol. 43, no. 2/3, pp. 481. Journal Code: Y0225A
 ISSN: 0037-3796
 CY Japan
 DT Conference; Short Communication
 LA English
 STA New
 L6 ANSWER 86 OF 305 JICST-EPlus COPYRIGHT 2004 JST on STN
 AN 1030157131 JICST-EPlus
 TI Pleiotrophin Effects on Dopaminergic ***Neurons*** and ***Neural*** ***Stem*** ***Cells*** in Culture.
 AU HIDA H; JUNG C G; WU C Z; KIM H J; NISHINO H
 CS Nagoya City Univ. Med. Sch., Nagoya
 SO Jpn J Physiol, (2002) vol. 52, no. Supplement, pp. S203. Journal Code: Z0753A
 CODEN: JJPHAM; ISSN: 0021-521X
 CY Japan

LA English
STA New

L6 ANSWER 87 OF 305 JICST-EPlus COPYRIGHT 2004 JST on STN
AN 1000470869 JICST-EPlus
TI ***Neural*** ***stem*** ***cells*** . The basic biology and
prospects for brain repair.

AU OKANO HIDEYUKI
CS Osaka Univ., Grad. Sch.
SO Nippon Shinkei Seishin Yakurigaku Zasshi (Japanese Journal of
Psychopharmacology), (2000) vol. 20, no. 1, pp. 21-26. Journal Code:
Y0724A (Fig. 5, Ref. 35)
ISSN: 1340-2544

CY Japan
DT Journal; General Review
LA Japanese
STA New

L6 ANSWER 88 OF 305 MEDLINE on STN
AN 2002465160 IN-PROCESS

DN PubMed ID: 12224296
TI Isolation, cultivation and identification of ***neural*** ***stem***
cell from human embryonic CNS.

AU Wang Lan; Hu Huozhen; Zhang Chenghu; Li Xiaoyu; Tao Dachang; Chen Fen
CS Cell Biology Department, West China Medical Center, Sichuan University,
Chengdu 610041.

SO Sheng wu yi xue gong cheng xue za zhi = Journal of biomedical engineering
= Shengwu yixue gongchengxue zazhi, (2002 Jun) 19 (2) 264-7.
Journal code: 9426398. ISSN: 1001-5515.

CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA Chinese
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20020913
Last Updated on STN: 20021213

L6 ANSWER 89 OF 305 MEDLINE on STN
AN 2002461734 MEDLINE

DN PubMed ID: 12220703
TI Enhanced viability and neuronal differentiation of neural progenitors by
chromaffin cell co-culture.

AU Schumm Michael A; Castellanos Daniel A; Frydel Beata R; Sagen Jacqueline
CS The Miami Project to Cure Paralysis, University of Miami School of
Medicine, Lois Pope Life Center, 1095 NW 14th Terrace (R-48), Miami, FL
33136, USA.

NC NS25054 (NINDS)

SO Brain research. Developmental brain research, (2002 Aug 30) 137 (2)
115-25.

Journal code: 8908639. ISSN: 0165-3806.

CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals

EM 200211

ED Entered STN: 20020911

Last Updated on STN: 20021214

Entered Medline: 20021126

L6 ANSWER 90 OF 305 PROMT COPYRIGHT 2004 Gale Group on STN

ACCESSION NUMBER: 1998:601564 PROMT

TITLE: DATA PROMOTE CELL ENGINEERING OVER GENETIC HUMAN FETAL STEM
CELLS PLACED IN RATS' BRAINS OFFER HOPE FOR
NEURODEGENERATIVE DISEASES By David N. Leff Science Editor.
BIOWORLD Today, (17 Nov 1998) pp. NA.

SOURCE:

LANGUAGE: English

WORD COUNT: 914

FULL TEXT IS AVAILABLE IN THE ALL FORMAT

L6 ANSWER 91 OF 305 PROMT COPYRIGHT 2004 Gale Group on STN

ACCESSION NUMBER: 1998:578539 PROMT

TITLE: CytoTherapeutics Researchers Demonstrate Potential for
Human ***Neural*** ***Stem*** ***Cells*** to
Repair or Replace CNS Tissue.

LANGUAGE:
WORD COUNT:

English
1701

FULL TEXT IS AVAILABLE IN THE ALL FORMAT

L6 ANSWER 92 OF 305 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN
AN 2004:600521 SCISEARCH
GA The Genuine Article (R) Number: 837EV
TI Efficient generation of neural precursors from adult human skin:
astrocytes promote neurogenesis from skin-derived stem cells
AU Joannides A; Gaughwin P; Schwiening C; Majed H; Sterling J; Compston A;
Chandran S (Reprint)
CS Univ Cambridge, Cambridge Ctr Brain Repair, Dept Clin Neurosci, Forvie
Site, Robinson Way, Cambridge CP2 2PY, England (Reprint); Univ Cambridge,
Cambridge Ctr Brain Repair, Dept Clin Neurosci, Cambridge CP2 2PY,
England; Univ Cambridge, Dept Physiol, Cambridge CP2 2PY, England; Univ
Cambridge, Dept Med, Cambridge CP2 2PY, England; Addenbrookes Hosp,
Cambridge, England
CYA England
SO LANCET, (10 JUL 2004) Vol. 364, No. 9429, pp. 172-178.
Publisher: LANCET LTD, 84 THEOBALDS RD, LONDON WC1X 8RR, ENGLAND.
ISSN: 0140-6736.
DT Article; Journal
LA English
REC Reference Count: 23
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L6 ANSWER 93 OF 305 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN
AN 2004:524975 SCISEARCH
GA The Genuine Article (R) Number: 824II
TI Functionally deficient neuronal differentiation of mouse embryonic
neural ***stem*** ***cells*** in vitro
AU Balasubramaniyan V; de Haas A H; Bakels R; Koper A; Boddeke H W G M;
Copray J M (Reprint)
CS Univ Groningen, Dept Med Physiol, A Deusinglaan 1, NL-9713 AV Groningen,
Netherlands (Reprint); Univ Groningen, Dept Med Physiol, NL-9713 AV
Groningen, Netherlands
CYA Netherlands
SO NEUROSCIENCE RESEARCH, (JUN 2004) Vol. 49, No. 2, pp. 261-265.
Publisher: ELSEVIER SCI IRELAND LTD, CUSTOMER RELATIONS MANAGER, BAY 15,
SHANNON INDUSTRIAL ESTATE CO, CLARE, IRELAND.
ISSN: 0168-0102.
DT Article; Journal
LA English
REC Reference Count: 29
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L6 ANSWER 94 OF 305 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN
AN 2004:374770 SCISEARCH
GA The Genuine Article (R) Number: 810SR
TI Characterization of multipotent adult stem cells from the skin:
transforming growth factor-beta (TGF-beta) facilitates cell growth
AU Kawase Y; Yanagi Y; Takato T; Fujimoto M; Okochi H (Reprint)
CS Int Med Ctr Japan, Dept Regenerat Med, Res Inst, Shinjuku Ku, 1-21-1
Toyama, Tokyo 1628655, Japan (Reprint); Int Med Ctr Japan, Dept Regenerat
Med, Res Inst, Shinjuku Ku, Tokyo 1628655, Japan; Univ Tokyo, Grad Sch
Med, Dept Oral & Maxillofacial Surg, Tokyo 1138655, Japan
CYA Japan
SO EXPERIMENTAL CELL RESEARCH, (15 APR 2004) Vol. 295, No. 1, pp. 194-203.
Publisher: ACADEMIC PRESS INC ELSEVIER SCIENCE, 525 B ST, STE 1900, SAN
DIEGO, CA 92101-4495 USA.
ISSN: 0014-4827.
DT Article; Journal
LA English
REC Reference Count: 32
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L6 ANSWER 95 OF 305 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN
AN 2002:253803 SCISEARCH
GA The Genuine Article (R) Number: 531EH
TI Alternative sources of ***neurons*** and glia from somatic stem cells
AU Torrente Y; Belicchi M; Pisati F; Pagano S F; Fortunato F; Sironi M;

CS Univ Milan, Inst Clin Neurol, Osped Policlin, Padigi Ponti, via Francesco Sforza 35, I-20122 Milan, Italy (Reprint); IRCCS Osped Maggiore Policlin, Milan, Italy; Natl Neurol Inst C Besta, Neuropharmacol Lab, Milan, Italy; Ctr Dino Ferrari, Inst Clin Neurol, Milan, Italy; IRCCS Eugenio Medea, Bosisio Parini, Italy

CYA Italy
SO CELL TRANSPLANTATION, (JAN 2001) Vol. 11, No. 1, pp. 25-34.
Publisher: COGNIZANT COMMUNICATION CORP, 3 HARTSDALE ROAD, ELMSFORD, NY 10523-3701 USA.
ISSN: 0963-6897.

DT Article; Journal
LA English
REC Reference Count: 35
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L6 ANSWER 96 OF 305 USPATFULL on STN
AN 2004:307168 USPATFULL
TI Culturing ***neural*** ***stem*** ***cells***
IN Svetlov, Stanislav I., Gainesville, FL, UNITED STATES
Kukekov, Valery G., Gainesville, FL, UNITED STATES
PI US 2004241839 A1 20041202
AI US 2004-821552 A1 20040409 (10)
PRAI US 2003-462357P 20030411 (60)
US 2003-463270P 20030416 (60)
DT Utility
FS APPLICATION
LN.CNT 761
INCL INCLM: 435/368.000
INCLS: 435/354.000; 514/054.000
NCL NCLM: 435/368.000
NCLS: 435/354.000; 514/054.000
IC [7]
ICM: C12N005-08
ICS: C12N005-06; A61K031-739

L6 ANSWER 97 OF 305 USPATFULL on STN
AN 2004:306502 USPATFULL
TI Isolation of cells from neural cell populations using antibodies to fal/dlk1
IN Jensen, Charlotte Harken, Svendborg, DENMARK
Teisner, Borge, Odense, DENMARK
Gronborg, Mette, Ballerup, DENMARK
Wahlberg, Lars U, Ballerup, DENMARK
PI US 2004241170 A1 20041202
AI US 2004-487442 A1 20040223 (10)
WO 2002-DK559 20020826
PRAI US 2001-60314794 20010824
DT Utility
FS APPLICATION
LN.CNT 1104
INCL INCLM: 424/178.100
NCL NCLM: 424/178.100
IC [7]
ICM: A61K039-395

L6 ANSWER 98 OF 305 USPATFULL on STN
AN 2004:299851 USPATFULL
TI Use of osteopontin for the treatment and/or prevention of neurologic diseases
IN Boschert, Ursula, Troinex, SWITZERLAND
Feger, Georg, Thoiry, FRANCE
Selvaraju, Raghuram, Vandoeuvres, SWITZERLAND
Bernaasconi, Lilia, Perly, SWITZERLAND
Papoian, Ruben, Nyon, SWITZERLAND
PI US 2004235720 A1 20041125
AI US 2004-477876 A1 20040409 (10)
WO 2002-EP5081 20020508
PRAI EP 2001-111296 20010517
DT Utility
FS APPLICATION
LN.CNT 3886
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
IC [7]
ICM: A61K038-18

L6 ANSWER 99 OF 305 USPATFULL on STN
AN 2004:299298 USPATFULL
TI Enhanced growth of adult stem cells
IN Prockop, Darwin, Philadelphia, PA, UNITED STATES
Sekiya, Ichiro, Tokyo, JAPAN
Gregory, Carl, New Orleans, LA, UNITED STATES
Spees, Jeffrey, New Orleans, LA, UNITED STATES
Smith, Jason, New Orleans, LA, UNITED STATES
Pochampally, Radhika, Marrero, LA, UNITED STATES
PI US 2004235166 A1 20041125
AI US 2003-442506 A1 20030521 (10)
DT Utility
FS APPLICATION
LN.CNT 2408
INCL INCLM: 435/377.000
INCLS: 435/372.000; 435/325.000; 435/405.000; 435/384.000
NCL NCLM: 435/377.000
NCLS: 435/372.000; 435/325.000; 435/405.000; 435/384.000
IC [7]
ICM: C12N005-00
ICS: C12N005-02; C12N005-08

L6 ANSWER 100 OF 305 USPATFULL on STN
AN 2004:299291 USPATFULL
TI Medium for growing human embryonic stem cells
IN Mandalam, Ramkumar, Union City, CA, UNITED STATES
Xu, Chunhui, Cupertino, CA, UNITED STATES
PI US 2004235159 A1 20041125
AI US 2004-873922 A1 20040621 (10)
RLI Division of Ser. No. US 2002-235094, filed on 4 Sep 2002, PENDING
Continuation-in-part of Ser. No. WO 2001-US1030, filed on 10 Jan 2001,
PENDING
PRAI US 2001-317478P 20010905 (60)
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US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)

DT Utility
FS APPLICATION
LN.CNT 1670
INCL INCLM: 435/366.000
INCLS: 435/404.000
NCL NCLM: 435/366.000
NCLS: 435/404.000
IC [7]
ICM: C12N005-08

L6 ANSWER 101 OF 305 USPATFULL on STN
AN 2004:299290 USPATFULL
TI Method of purification of cells
IN Bartlett, Perry Francis, North Carlton, AUSTRALIA
Rietze, Rodney Lee, Brunswick, AUSTRALIA
PI US 2004235158 A1 20041125
AI US 2004-479306 A1 20040629 (10)
WO 2002-AU700 20020531
PRAI AU 2001-5403 20010601
DT Utility
FS APPLICATION
LN.CNT 2239
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08

L6 ANSWER 102 OF 305 USPATFULL on STN
AN 2004:299133 USPATFULL
TI Method for retrospective birth dating of biomolecules, cells, tissues,
organs and organisms
IN Spalding, Kirsty, Stockholm, SWEDEN
Frisen, Jonas, Stockholm, SWEDEN
PI US 2004235000 A1 20041125
AI US 2003-654669 A1 20030903 (10)
PRAI US 2002-407863P 20020903 (60)
DT Utility

LN.CNT 1198
INCL INCLM: 435/006.000
NCL NCLM: 435/006.000
[7]
IC ICM: C12Q001-68

L6 ANSWER 103 OF 305 USPATFULL on STN
AN 2004:292207 USPATFULL
TI Screening and therapeutic methods relating to neurogenesis
IN Zhou, Qun-Yong, Irvine, CA, UNITED STATES
PI Cheng, Michelle Y., Irvine, CA, UNITED STATES
AI US 2003-680554 A1 20031003 (10)
PRAI US 2002-416202P 20021004 (60)
DT Utility
FS APPLICATION
LN.CNT 2368
INCL INCLM: 435/007.200
NCL INCLS: 514/012.000
NCL NCLM: 435/007.200
NCLS: 514/012.000
[7]
IC ICM: G01N033-53
ICS: G01N033-567; A61K038-17
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 104 OF 305 USPATFULL on STN
AN 2004:286719 USPATFULL
TI Systems and methods for screening for modulators of neural differentiation
IN Jessel, Thomas, Bronx, NY, UNITED STATES
Wichterle, Hynek, New York, NY, UNITED STATES
Wilson, Sara I., New York, NY, UNITED STATES
PI US 2004224887 A1 20041111
AI US 2004-789308 A1 20040226 (10)
RLI Continuation-in-part of Ser. No. US 2002-196882, filed on 16 Jul 2002,
DT PENDING
Utility
FS APPLICATION
LN.CNT 4179
INCL INCLM: 514/012.000
INCLS: 435/004.000; 435/455.000; 435/366.000
NCL NCLM: 514/012.000
NCLS: 435/004.000; 435/455.000; 435/366.000
[7]
IC ICM: A61K038-17
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 105 OF 305 USPATFULL on STN
AN 2004:286140 USPATFULL
TI Systems and methods for screening for modulators of neural differentiation
IN Jessel, Thomas, Bronx, NY, UNITED STATES
Wichterle, Hynek, New York, NY, UNITED STATES
Wilson, Sara, New York, NY, UNITED STATES
PI US 2004224302 A1 20041111
AI US 2004-789266 A1 20040226 (10)
RLI Continuation-in-part of Ser. No. US 2002-196882, filed on 16 Jul 2002,
DT PENDING
Utility
FS APPLICATION
LN.CNT 4051
INCL INCLM: 435/004.000
INCLS: 435/455.000; 514/012.000
NCL NCLM: 435/004.000
NCLS: 435/455.000; 514/012.000
[7]
IC ICM: C12Q001-00
ICS: A61K038-18
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 106 OF 305 USPATFULL on STN
AN 2004:274264 USPATFULL
TI VEGF-C or VEGF-D materials and methods for treatment of neuropathologies
IN Alitalo, Kari, Helsinki, FINLAND

Haikko, Paula, Helsinki, FINLAND
Sainio, Kirsi, Helsinki, FINLAND
Wartiovaara, Kirmo, Helsinki, FINLAND

PI US 2004214766 A1 20041028
AI US 2003-669176 A1 20030923 (10)
RLI Continuation-in-part of Ser. No. US 2002-262538, filed on 30 Sep 2002,
PENDING
PRAI US 2001-326326P 20011001 (60)
DT Utility
FS APPLICATION
LN.CNT 8569
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
IC [7]
ICM: A61K038-18

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 107 OF 305 USPATFULL on STN

AN 2004:273826 USPATFULL
TI Dopaminergic ***neurons*** differentiated from embryonic cells for
treating neurodegenerative diseases
IN Isacson, Ole, Cambridge, MA, UNITED STATES
Bjorklund, Lars, Stockholm, SWEDEN
PI US 2004214324 A1 20041028
AI US 2003-731550 A1 20031209 (10)
PRAI US 2002-432128P 20021209 (60)
DT Utility
FS APPLICATION
LN.CNT 1786
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 108 OF 305 USPATFULL on STN

AN 2004:267736 USPATFULL
TI Differentiation proteins
IN Lee, Dong-Ki, Daejeon, KOREA, REPUBLIC OF
Lee, Yangsoon, Daejeon, KOREA, REPUBLIC OF
Kim, Jin-Soo, Daejeon, KOREA, REPUBLIC OF
PA TOOLGEN, INC (non-U.S. corporation)
PI US 2004209277 A1 20041021
AI US 2003-669861 A1 20030924 (10)
RLI Continuation-in-part of Ser. No. US 2002-314669, filed on 9 Dec 2002,
PENDING
PRAI US 2001-338441P 20011207 (60)
US 2002-376053P 20020426 (60)
US 2002-400904P 20020802 (60)
US 2002-401089P 20020805 (60)
DT Utility
FS APPLICATION
LN.CNT 8164
INCL INCLM: 435/006.000
INCLS: 435/069.100; 435/226.000; 435/320.100; 435/325.000; 536/023.200;
435/196.000
NCL NCLM: 435/006.000
NCLS: 435/069.100; 435/226.000; 435/320.100; 435/325.000; 536/023.200;
435/196.000
IC [7]
ICM: C12Q001-68
ICS: C07H021-04; C12N009-64; C12N009-16

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 109 OF 305 USPATFULL on STN

AN 2004:267321 USPATFULL
TI Therapeutic uses for mesenchymal stromal cells
IN Tennekoon, Gihan, Wynnewood, PA, UNITED STATES
Coyle, Andrew J., Phila., PA, UNITED STATES
Grinspan, Judith, Ardmore, PA, UNITED STATES
Beesley, Jackie S., London, UNITED KINGDOM
PI US 2004208858 A1 20041021
AI US 2004-750748 A1 20040102 (10)
RLI Continuation of Ser. No. US 2001-833066, filed on 12 Apr 2001, GRANTED,
Pat. No. US 6673606

US 2000-242674P 20001024 (60)

DT Utility

FS APPLICATION

LN.CNT 1070

INCL INCLM: 424/093.210

INCLS: 435/368.000

NCL NCLM: 424/093.210

NCLS: 435/368.000

IC [7]

ICM: A61K048-00

ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 110 OF 305 USPATFULL on STN

AN 2004:253792 USPATFULL

TI Persistent expression of candidate molecule in proliferating stem and progenitor cells for delivery of therapeutic products

IN Rao, Mahendra S., Timonium, MD, UNITED STATES

Capecchi, Mario R., Salt Lake City, UT, UNITED STATES

PI US 2004197317 A1 20041007

AI US 2004-789465 A1 20040227 (10)

RLI Continuation of Ser. No. WO 2004-US929, filed on 13 Jan 2004, PENDING

PRAI US 2003-440152P 20030113 (60)

DT Utility

FS APPLICATION

LN.CNT 1424

INCL INCLM: 424/093.210

INCLS: 435/455.000; 435/366.000

NCL NCLM: 424/093.210

NCLS: 435/455.000; 435/366.000

IC [7]

ICM: A61K048-00

ICS: C12N015-85; C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 111 OF 305 USPATFULL on STN

AN 2004:246621 USPATFULL

TI Compositions for induction of a therapeutic response

IN Froix, Michael, Mountain View, CA, UNITED STATES

Bruszewski, Walter, San Francisco, CA, UNITED STATES

PI US 2004191215 A1 20040930

AI US 2004-808927 A1 20040324 (10)

PRAI US 2003-457702P 20030325 (60)

DT Utility

FS APPLICATION

LN.CNT 2710

INCL INCLM: 424/085.100

NCL NCLM: 424/085.100

IC [7]

ICM: A61K038-19

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 112 OF 305 USPATFULL on STN

AN 2004:242055 USPATFULL

TI Human FGF-20 gene and gene expression products

IN Itoh, Nobuyuki, Kyoto, JAPAN

Kavanaugh, Michael, Mill Valley, CA, United States

PA Kyoto University, Kyoto, JAPAN (non-U.S. corporation)

Chiron Corporation, Emeryville, CA, United States (U.S. corporation)

PI US 6797695 B1 20040928

AI US 2000-692945 200001020 (9)

PRAI US 2000-187856P 20000308 (60)

US 1999-161162P 19991022 (60)

DT Utility

FS GRANTED

LN.CNT 2103

INCL INCLM: 514/012.000

INCLS: 530/350.000

NCL NCLM: 514/012.000

NCLS: 530/350.000

IC [7]

ICM: A61K038-18

ICS: C07K014-50

EXF 514/12; 535/350

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 113 OF 305 USPATFULL on STN
AN 2004:240237 USPATFULL
TI Cytomodulating peptides and methods for treating neurological disorders
IN Iyer, Suhasini, San Ramon, CA, UNITED STATES
Buelow, Roland, Palo Alto, CA, UNITED STATES
Lazarov, Mirella Emilia, Palo Alto, CA, UNITED STATES
Fong, Timothy, Moraga, CA, UNITED STATES
PI US 2004186052 A1 20040923
AI US 2003-693331 A1 20031024 (10)
PRAI US 2002-421297P 20021024 (60)
US 2002-431420P 20021205 (60)
US 2003-470839P 20030515 (60)
DT Utility
FS APPLICATION
LN.CNT 2528
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
IC [7]
ICM: A61K038-17
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 114 OF 305 USPATFULL on STN
AN 2004:239624 USPATFULL
TI Method for discovering neurogenic agents
IN Kelleher-Andersson, Judith, Columbia, MD, UNITED STATES
Johe, Karl K., Potomac, MD, UNITED STATES
PI US 2004185429 A1 20040923
AI US 2003-728652 A1 20031205 (10)
PRAI US 2002-432359P 20021209 (60)
US 2003-493674P 20030808 (60)
DT Utility
FS APPLICATION
LN.CNT 917
INCL INCLM: 435/004.000
INCLS: 435/368.000
NCL NCLM: 435/004.000
NCLS: 435/368.000
IC [7]
ICM: C12Q001-00
ICS: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 115 OF 305 USPATFULL on STN
AN 2004:223722 USPATFULL
TI Cell expansion system for use in neural transplantation
IN Studer, Lorenz, New York, NY, United States
McKay, Ron D., Bethesda, MD, United States
PA The United States of America as represented by the Department of Health
and Human Services, Washington, DC, United States (U.S. corporation)
PI US 6787356 B1 20040907
WO 2000005343 20000203
AI US 2001-744384 20010316 (9)
WO 1999-US16825 19990723
PRAI US 1998-93991P 19980724 (60)
DT Utility
FS GRANTED
LN.CNT 1224
INCL INCLM: 435/377.000
INCLS: 435/325.000; 435/384.000; 424/093.210; 514/044.000
NCL NCLM: 435/377.000
NCLS: 424/093.210; 435/325.000; 435/384.000; 514/044.000
IC [7]
ICM: C12N005-02
ICS: A61K048-00
EXF 435/377; 435/324; 435/384; 435/325; 924/93.21; 514/44
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 116 OF 305 USPATFULL on STN
AN 2004:221277 USPATFULL
TI Method for monitoring the transition of a cell from one state into
another
IN Berlin, Kurt, Stahnsdorf, GERMANY, FEDERAL REPUBLIC OF
Olek, Alexander, Berlin, GERMANY, FEDERAL REPUBLIC OF
Olek, Sven, Berlin, GERMANY, FEDERAL REPUBLIC OF
PI US 2004171046 A1 20040902

PRAI EP 2002-90399

20021210

DT Utility

FS APPLICATION

LN.CNT 1437

INCL INCLM: 435/006.000

NCL NCLM: 435/006.000

IC [7]

ICM: C12Q001-68

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 117 OF 305 USPATFULL on STN

AN 2004:208987 USPATFULL

TI Placental stem cells and uses thereof

IN Strom, Stephen C., Allison Park, PA, UNITED STATES

Miki, Toshio, Pittsburgh, PA, UNITED STATES

PI US 2004161419 A1 20040819

AI US 2003-691468 A1 20031022 (10)

RLI Continuation-in-part of Ser. No. US 2003-420656, filed on 21 Apr 2003,
PENDING

PRAI US 2002-374172P 20020419 (60)

DT Utility

FS APPLICATION

LN.CNT 2369

INCL INCLM: 424/093.210

INCLS: 435/366.000

NCL NCLM: 424/093.210

NCLS: 435/366.000

IC [7]

ICM: A61K048-00

ICS: C12N005-08

L6 ANSWER 118 OF 305 USPATFULL on STN

AN 2004:208982 USPATFULL

TI Method of curing injured spinal cord and therapeutic agents for that

IN Kawaguchi, Saburo, Kyoto-shi, JAPAN

Nishio, Takeshi, Kyoto-shi, JAPAN

PI US 2004161414 A1 20040819

AI US 2004-777132 A1 20040213 (10)

RLI Continuation of Ser. No. WO 2002-JP8493, filed on 23 Aug 2002, UNKNOWN

PRAI JP 2001-253586 20010823

DT Utility

FS APPLICATION

LN.CNT 400

INCL INCLM: 424/093.700

NCL NCLM: 424/093.700

IC [7]

ICM: A61K045-00

L6 ANSWER 119 OF 305 USPATFULL on STN

AN 2004:197578 USPATFULL

TI Lp mammalian proteins; related reagents

IN Amegadzie, Bernard Yaovi, Malvern, PA, UNITED STATES

Basinski, Margaret Barbara, Indianapolis, IN, UNITED STATES

Scott, William L., Indianapolis, IN, UNITED STATES LR

Chen, Dayue, Carmel, IN, UNITED STATES

Huang, Chongxi, Indianapolis, IN, UNITED STATES

Keleher, Gerald Patrick, Indianapolis, IN, UNITED STATES

Perkins, Douglas Raymond, New Palestine, IN, UNITED STATES

Rosteck, Paul Robert, Indianapolis, IN, UNITED STATES

Rowlinson, Scott William, Indianapolis, IN, UNITED STATES

Sankhavaram, Patanjali Raghavac, Carmel, IN, UNITED STATES

Seno, Eugene Thomas, Weybridge, VT, UNITED STATES

Su, Eric Wen, Carmel, IN, UNITED STATES

Zhi, Yu, Indianapolis, IN, UNITED STATES

PI US 2004152885 A1 20040805

AI US 2003-480172 A1 20030827 (10)

WO 2002-US5093 20020301

DT Utility

FS APPLICATION

LN.CNT 12032

INCL INCLM: 536/023.500

NCL NCLM: 536/023.500

IC [7]

ICM: C12Q001-68

ICS: C07H021-04

L6 ANSWER 120 OF 305 USPATFULL on STN
AN 2004:196884 USPATFULL
TI Selective antibody targeting of undifferentiated stem cells
IN McWhir, Jim, Midlothian, UNITED KINGDOM
Gold, Joseph D., San Francisco, CA, UNITED STATES
Schiff, J. Michael, Menlo Park, CA, UNITED STATES
PI US 2004152189 A1 20040805
AI US 2004-811012 A1 20040326 (10)
RLI Division of Ser. No. US 2001-995419, filed on 26 Nov 2001, PENDING
PRAI US 2000-253357P 20001127 (60)
US 2000-253443P 20001127 (60)
US 2000-253395P 20001127 (60)

DT Utility
FS APPLICATION

LN.CNT 3590
INCL INCLM: 435/366.000
INCLS: 435/455.000
NCL NCLM: 435/366.000
NCLS: 435/455.000

IC [7]
ICM: C12N005-08
ICS: C12N015-85

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 121 OF 305 USPATFULL on STN
AN 2004:190250 USPATFULL
TI Dopamine ***neurons*** from human embryonic stem cells
IN Freed, Curt R., Denver, CO, UNITED STATES
Buytaert-Hoefen, Kimberley A., Lakewood, CO, UNITED STATES
PA The Regents of the University of Colorado, a body corporate (U.S.
corporation)
PI US 2004147020 A1 20040729
AI US 2003-699302 A1 20031030 (10)
PRAI US 2002-423348P 20021101 (60)

DT Utility
FS APPLICATION

LN.CNT 1215
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 122 OF 305 USPATFULL on STN
AN 2004:186665 USPATFULL
TI Method of isolating adult mammalian CNS-derived progenitor stem cells
using density gradient centrifugation
IN Gage, Fred H., La Jolla, CA, United States
Palmer, Theo, San Carlos, CA, United States
Safar, Francis G., Irvine, CA, United States
Takahashi, Jun, Kyoto, JAPAN
Takahashi, Masayo, Kyoto, JAPAN
PA The Salk Institute for Biological Studies, La Jolla, CA, United States
(U.S. corporation)
PI US 6767738 B1 20040727
WO 2000047718 20000817
AI US 2002-913192 20020212 (9)
WO 2000-US3596 20000211
PRAI US 1999-155871P 19990924 (60)
US 1999-119642P 19990211 (60)

DT Utility
FS GRANTED

LN.CNT 2082
INCL INCLM: 435/325.000
INCLS: 435/366.000; 435/368.000; 435/378.000
NCL NCLM: 435/325.000
NCLS: 435/366.000; 435/368.000; 435/378.000

IC [7]
ICM: C12N005-02
ICS: C12N005-08

EXF 435/325; 435/352; 435/354; 435/363; 435/366; 435/368; 435/378; 435/7.21;
435/29; 435/240.1; 435/240.2; 435/240.21; 435/240.23; 435/384; 435/405;
435/406; 435/395; 435/402; 536/23.1

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 123 OF 305 USPATFULL on STN
AN 2004:184063 USPATFULL
TI Methods of treating neurological conditions with hematopoietic growth
factors
IN Schaebitz, Wolf-Ruediger, Dossenheim, GERMANY, FEDERAL REPUBLIC OF
Schneider, Armin, Heidelberg, GERMANY, FEDERAL REPUBLIC OF
Krueger, Carola, Speyer, GERMANY, FEDERAL REPUBLIC OF
Sommer, Clemens, Guenzburg, GERMANY, FEDERAL REPUBLIC OF
Schwab, Stefan, Heidelberg, GERMANY, FEDERAL REPUBLIC OF
Kollmar, Rainer, Heidelberg, GERMANY, FEDERAL REPUBLIC OF
Maurer, Martin, Heidelberg, GERMANY, FEDERAL REPUBLIC OF
Weber, Daniela, Mannheim, GERMANY, FEDERAL REPUBLIC OF
Gassler, Nikolaus, Heidelberg, GERMANY, FEDERAL REPUBLIC OF
PA AXARON BIOSCIENCE AG, Heidelberg, GERMANY, FEDERAL REPUBLIC OF (non-U.S.
corporation)
PI US 2004141946 A1 20040722
AI US 2003-659295 A1 20030911 (10)
RLI Continuation of Ser. No. US 2002-331755, filed on 31 Dec 2002, PENDING
DT Utility
FS APPLICATION
LN.CNT 3205
INCL INCLM: 424/085.100
INCLS: 424/085.200; 514/012.000
NCL NCLM: 424/085.100
NCLS: 424/085.200; 514/012.000
IC [7]
ICM: A61K038-20
ICS: A61K038-19; A61K038-18
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 124 OF 305 USPATFULL on STN
AN 2004:178369 USPATFULL
TI Enriched central nervous system stem cell and progenitor cell
populations, and methods for identifying, isolating and enriching for
such populations
IN Uchida, Nobuko, Palo Alto, CA, UNITED STATES
Capela, Alexandra, Mountain View, CA, UNITED STATES
PI US 2004137535 A1 20040715
AI US 2003-649234 A1 20030827 (10)
PRAI US 2002-406546P 20020827 (60)
DT Utility
FS APPLICATION
LN.CNT 2296
INCL INCLM: 435/007.200
INCLS: 435/368.000
NCL NCLM: 435/007.200
NCLS: 435/368.000
IC [7]
ICM: G01N033-53
ICS: G01N033-567; C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 125 OF 305 USPATFULL on STN
AN 2004:165358 USPATFULL
TI Endogenous granzyme B in non-immune cells
IN Xu, Hong-Ji, Houston, TX, UNITED STATES
Hu, Shi-Xue, Houston, TX, UNITED STATES
Mills, Gordon B., Houston, TX, UNITED STATES
PI US 2004126846 A1 20040701
AI US 2003-670135 A1 20030924 (10)
PRAI US 2002-413591P 20020925 (60)
DT Utility
FS APPLICATION
LN.CNT 4641
INCL INCLM: 435/069.100
INCLS: 435/320.100; 435/325.000; 435/226.000; 536/023.200
NCL NCLM: 435/069.100
NCLS: 435/320.100; 435/325.000; 435/226.000; 536/023.200
IC [7]
ICM: C12N009-64
ICS: C07H021-04
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 126 OF 305 USPATFULL on STN
AN 2004:158136 USPATFULL

IN Zanner, Joseph Edward, Saint Louis, MO, UNITED STATES
PI US 2004120932 A1 20040624
AI US 2003-714211 A1 20031114 (10)
RLI Continuation of Ser. No. US 2001-919298, filed on 31 Jul 2001, PENDING
PRAI US 2000-254551P 20001212 (60)
DT Utility
FS APPLICATION
LN.CNT 1353
INCL INCLM: 424/093.700
INCLS: 435/069.100; 435/366.000; 514/050.000; 514/575.000
NCL NCLM: 424/093.700
NCLS: 435/069.100; 435/366.000; 514/050.000; 514/575.000
IC [7]
ICM: A61K045-00
ICS: A61K031-7072; A61K031-19; C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 127 OF 305 USPATFULL on STN
AN 2004:146863 USPATFULL
TI Methods, compositions and kits for promoting recovery from damage to the central nervous system
IN Finkelstein, Seth P., Needham, MA, United States
Snyder, Evan Y., Jamaica Plain, MA, United States
PA The General Hospital Corporation, Boston, MA, United States (U.S. corporation)
Children's Medical Center Corporation, Boston, MA, United States (U.S. corporation)
PI US 6749850 B1 20040615
AI US 2000-642277 20000818 (9)
PRAI US 1999-149561P 19990818 (60)
DT Utility
FS GRANTED
LN.CNT 2033
INCL INCLM: 424/093.700
INCLS: 424/093.100; 514/012.000
NCL NCLM: 424/093.700
NCLS: 424/093.100; 514/012.000
IC [7]
ICM: A61K035-14
ICS: A61K038-08
EXF 424/93.7; 424/198.1; 514/12
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 128 OF 305 USPATFULL on STN
AN 2004:140277 USPATFULL
TI Multipotent adult stem cells, sources thereof, methods of obtaining same, methods of differentiation thereof, methods of use thereof and cells derived thereof
IN Furcht, Leo T, Minneapolis, MN, UNITED STATES
Verfaillie, Catherine M, St Paul, MN, UNITED STATES
Reyes, Morayma, Minneapolis, MN, UNITED STATES
PI US 2004107453 A1 20040603
AI US 2004-467963 A1 20040105 (10)
WO 2002-US4652 20020214
DT Utility
FS APPLICATION
LN.CNT 4100
INCL INCLM: 800/018.000
INCLS: 424/093.700; 800/021.000; 435/353.000; 435/354.000; 435/366.000
NCL NCLM: 800/018.000
NCLS: 424/093.700; 800/021.000; 435/353.000; 435/354.000; 435/366.000
IC [7]
ICM: A01K067-027
ICS: C12N005-06; C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 129 OF 305 USPATFULL on STN
AN 2004:139024 USPATFULL
TI Central nerve system precursor cells inducing synaptogenic ***neurons*** in spinal cord
IN Okano, Hideyuki, Suita-shi, JAPAN
Ogawa, Yuhto, Kawasa-shi, JAPAN
PI US 2004106197 A1 20040603
AI US 2003-472531 A1 20030924 (10)
WO 2001-JP9620 20011102

DT UTILITY
FS APPLICATION
LN.CNT 574
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 130 OF 305 USPATFULL on STN
AN 2004:138675 USPATFULL
TI Promoting Recovery from Damage to the Central Nervous System
IN Finklestein, Seth P., 308A Hunnewell St, Needham, MA, UNITED STATES
02494
Snyder, Evan Y., 22 Hillcroft Rd, Jamaica Plain, MA, UNITED STATES
02130
PI US 2004105847 A1 20040603
AI US 2003-605456 A1 20030930 (10)
RLI Continuation of Ser. No. US 2000-642277, filed on 18 Aug 2000, PENDING
PRAI US 1999-149561P 19990818 (60)
DT Utility
FS APPLICATION
LN.CNT 1943
INCL INCLM: 424/093.700
INCLS: 514/012.000
NCL NCLM: 424/093.700
NCLS: 514/012.000
IC [7]
ICM: A61K045-00
ICS: A61K038-18

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 131 OF 305 USPATFULL on STN
AN 2004:134911 USPATFULL
TI Methods for inducing in vivo proliferation and migration of transplanted progenitor cells in the brain
IN Bjorklund, Anders, Lund, SWEDEN
PI US 2004103448 A1 20040527
AI US 2003-713373 A1 20031113 (10)
RLI Continuation of Ser. No. US 2000-693043, filed on 20 Oct 2000, PENDING
Continuation-in-part of Ser. No. US 1999-339093, filed on 23 Jun 1999,
ABANDONED Division of Ser. No. US 1997-926313, filed on 5 Sep 1997,
GRANTED, Pat. No. US 5968829
PRAI WO 1998-US18597 19980904
US 1999-160553P 19991020 (60)
DT Utility
FS APPLICATION
LN.CNT 1694
INCL INCLM: 800/009.000
INCLS: 435/368.000
NCL NCLM: 800/009.000
NCLS: 435/368.000
IC [7]
ICM: A01K067-00
ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 132 OF 305 USPATFULL on STN
AN 2004:132982 USPATFULL
TI Guided development and support of hydrogel-cell compositions
IN Vacanti, Charles A., Uxbridge, MA, UNITED STATES
Vacanti, Joseph P., Winchester, MA, UNITED STATES
Vacanti, Martin P., Westborough, MA, UNITED STATES
PA University of Massachusetts, a Massachusetts corporation (U.S.
corporation)
PI US 2004101518 A1 20040527
AI US 2003-713472 A1 20031114 (10)
RLI Continuation of Ser. No. US 2000-658912, filed on 11 Sep 2000, ABANDONED
Continuation of Ser. No. US 1998-200033, filed on 25 Nov 1998, GRANTED,
Pat. No. US 6171610 Continuation-in-part of Ser. No. US 1998-66038,
filed on 24 Apr 1998, GRANTED, Pat. No. US 6027744
DT Utility
FS APPLICATION
LN.CNT 1691
INCL INCLM: 424/093.700

NCL NCLM: 424/093.700
NCLS: 424/426.000
IC [7]
ICM: A61K045-00
ICS: A61F002-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 133 OF 305 USPATFULL on STN
AN 2004:127550 USPATFULL

TI Composition for the protection and regeneration of nerve cells containing berberine derivatives

IN Choi, Byung-Kil, Seo-gu, KOREA, REPUBLIC OF
Kim, Yun-Hee, Seoul, KOREA, REPUBLIC OF
Kim, Soo-Kyung, Jung-gu, KOREA, REPUBLIC OF
Lim, Jung-Su, Seoul, KOREA, REPUBLIC OF
Kim, Hyo-Sup, Namdong-gu, KOREA, REPUBLIC OF
Park, Dae-Sung, Seoul, KOREA, REPUBLIC OF
Chang, Chi-Young, Bucheon-si, KOREA, REPUBLIC OF

PA EUGENBIO INC., Chungcheongnam-do, KOREA, REPUBLIC OF (non-U.S. corporation)

PI US 2004097534 A1 20040520

AI US 2003-389693 A1 20030314 (10)

RLI Continuation of Ser. No. WO 2002-KR1307, filed on 10 Jul 2002, UNKNOWN

PRAI KR 2001-41248 20010710
KR 2002-40015 20020710

DT Utility

FS APPLICATION

LN.CNT 1579

INCL INCLM: 514/283.000

NCL NCLM: 514/283.000

IC [7]

ICM: A61K031-4745

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 134 OF 305 USPATFULL on STN
AN 2004:121033 USPATFULL

TI Method of enhancing ***neural*** ***stem*** ***cell*** proliferation, differentiation, and survival using pituitary adenylate cyclase activating polypeptide (PACAP)

IN Ohta, Shigeki, Tokyo, JAPAN

Weiss, Samuel, Calgary, CANADA

PI US 2004092448 A1 20040513

AI US 2003-630967 A1 20030731 (10)

PRAI US 2002-399390P 20020731 (60)

DT Utility

FS APPLICATION

LN.CNT 1004

INCL INCLM: 514/012.000

NCL NCLM: 514/012.000

IC [7]

ICM: A61K038-17

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 135 OF 305 USPATFULL on STN
AN 2004:120603 USPATFULL

TI Method of treating alzheimer's disease with cell therapy

IN Snyder, Evan Y., La Jolla, CA, UNITED STATES

Loring, Jeanne F., Del Mar, CA, UNITED STATES

Snable, Gary L., Atherton, CA, UNITED STATES

Aboody, Karen S., Arcadia, CA, UNITED STATES

Daadi, Marcel M., Palo Alto, CA, UNITED STATES

PI US 2004092013 A1 20040513

AI US 2003-344712 A1 20031206 (10)

WO 2001-US25629 20010814

DT Utility

FS APPLICATION

LN.CNT 456

INCL INCLM: 435/368.000

INCLS: 424/093.700

NCL NCLM: 435/368.000

NCLS: 424/093.700

IC [7]

ICM: A61K045-00

ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 136 OF 305 USPATFULL ON STN
AN 2004:120602 USPATFULL
TI Process for producing nerve stem cells, motor ***neurons***, and
gabaergic ***neurons*** from embryonic stem cells
IN Okano, Hideyuki, Tokyo, JAPAN
Shimazaki, Takuya, Tokyo, JAPAN
PI US 2004092012 A1 20040513
AI US 2003-472490 A1 20030930 (10)
WO 2001-JP8703 20011003
PRAI JP 2001-99074 20010330
DT Utility
FS APPLICATION
LN.CNT 364
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 137 OF 305 USPATFULL on STN
AN 2004:120600 USPATFULL
TI Method of proliferating and inducing brain stem cells to differentiate
to ***neurons***
IN Ruiz I Altaba, Ariel, New York, NY, UNITED STATES
Alvarez-Buylla, Arturo, San Francisco, CA, UNITED STATES
Lim, Daniel A., San Francisco, CA, UNITED STATES
Dahmane, Nadia, Marseille, FRANCE
Palma, Veronica, New York, NY, UNITED STATES
PI US 2004092010 A1 20040513
AI US 2003-414267 A1 20030415 (10)
PRAI US 2002-372508P 20020415 (60)
DT Utility
FS APPLICATION
LN.CNT 2801
INCL INCLM: 435/354.000
INCLS: 435/368.000
NCL NCLM: 435/354.000
NCLS: 435/368.000
IC [7]
ICM: C12N005-06
ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 138 OF 305 USPATFULL on STN
AN 2004:94892 USPATFULL
TI Method and compositions for inhibiting tumorigenesis
IN Altaba, Ariel Ruiz i., New York, NY, UNITED STATES
Sanchez, Maria Pilar, New York, NY, UNITED STATES
PI US 2004072345 A1 20040415
AI US 2003-456954 A1 20030606 (10)
RLI Continuation-in-part of Ser. No. US 2001-825155, filed on 3 Apr 2001,
PENDING Continuation of Ser. No. US 1998-102491, filed on 22 Jun 1998,
GRANTED, Pat. No. US 6238876 Continuation-in-part of Ser. No. US
2003-414267, filed on 15 Apr 2003, PENDING
PRAI US 1997-50286P 19970620 (60)
US 2002-372508P 20020415 (60)
DT Utility
FS APPLICATION
LN.CNT 3200
INCL INCLM: 435/368.000
INCLS: 435/354.000
NCL NCLM: 435/368.000
NCLS: 435/354.000
IC [7]
ICM: C12Q001-68
ICS: G01N033-574; C12N005-06; C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 139 OF 305 USPATFULL on STN
AN 2004:94213 USPATFULL
TI Method for therapeutically treating a clinically recognized form of
cardiopathology in a living mammal
IN Xiao, Yong-Fu, Wayland, MA, UNITED STATES
Morgan, James P., Newton Centre, MA, UNITED STATES
PI US 2004071665 A1 20040415

RL1 Continuation or Ser. No. WO 2002-US7555, filed on 14 Mar 2002, PENDING
Continuation-in-part of Ser. No. US 2000-684679, filed on 7 Oct 2000,
GRANTED, Pat. No. US 6607720 Continuation-in-part of Ser. No. US
2000-655124, filed on 5 Sep 2000, GRANTED, Pat. No. US 6534052

DT Utility

FS APPLICATION

LN.CNT 4010

INCL INCLM: 424/093.700

NCL NCLM: 424/093.700

IC [7]

ICM: A61K048-00

L6 ANSWER 140 OF 305 USPATFULL on STN

AN 2004:82751 USPATFULL

TI Neurogenesis from hepatic stem cells

IN Petersen, Bryon E., Gainesville, FL, UNITED STATES

Deng, Jie, Gainesville, FL, UNITED STATES

PI US 2004063202 A1 20040401

AI US 2003-651829 A1 20030828 (10)

PRAI US 2002-406513P 20020828 (60)

DT Utility

FS APPLICATION

LN.CNT 633

INCL INCLM: 435/368.000

NCL NCLM: 435/368.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 141 OF 305 USPATFULL on STN

AN 2004:76634 USPATFULL

TI Cell populations which co-express CD49c and CD90

IN Ho, Tony W., Berwyn, PA, UNITED STATES

Kopen, Gene C., Wynnewood, PA, UNITED STATES

Righter, William F., Ridley Park, PA, UNITED STATES

Rutkowski, J. Lynn, Wynnewood, PA, UNITED STATES

Wagner, Joseph, West Chester, PA, UNITED STATES

Herring, W. Joseph, Valley Forge, PA, UNITED STATES

Ragaglia, Vanessa, Newtown Square, PA, UNITED STATES

PA Neuronyx, Inc. (U.S. corporation)

PI US 2004058412 A1 20040325

AI US 2002-251685 A1 20020920 (10)

DT Utility

FS APPLICATION

LN.CNT 2319

INCL INCLM: 435/069.100

INCLS: 435/366.000; 435/320.100; 435/325.000; 424/093.700

NCL NCLM: 435/069.100

NCLS: 435/366.000; 435/320.100; 435/325.000; 424/093.700

IC [7]

ICM: C12N005-08

ICS: C12P021-02; A61K045-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 142 OF 305 USPATFULL on STN

AN 2004:51457 USPATFULL

TI Functional role and potential therapeutic use of PACAP, VIP and
Maxadilan in relation to adult neural stem or progenitor cells

IN Mercer, Alex, Bromma, SWEDEN

Patrone, Cesare, Hagersten, SWEDEN

Ronnholm, Harriet, Trangsund, SWEDEN

Wikstrom, Lilian, Spanga, SWEDEN

PI US 2004038888 A1 20040226

AI US 2003-429062 A1 20030502 (10)

PRAI US 2002-377734P 20020503 (60)

US 2002-393264P 20020702 (60)

US 2002-426827P 20021115 (60)

DT Utility

FS APPLICATION

LN.CNT 3987

INCL INCLM: 514/012.000

NCL NCLM: 514/012.000

IC [7]

ICM: A61K038-17

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 143 OF 305 USPATFULL ON STN
AN 2004:44604 USPATFULL
TI Multipotent neural stemcells from peripheral tissues and uses thereof
IN Toma, Jean, Toronto Ontario, CANADA
Akhavan, Mahnaz, Toronto Ontario, CANADA
Fernandes, Karl J. L., Toronto Ontario, CANADA
Fortier, Mathieu, Orford, CANADA
Miller, Freda, Toronto Ontario, CANADA
Golster, Andrew, Saskatoon Saskatchewan, CANADA
PI US 2004033597 A1 20040219
AI US 2003-181508 A1 20030401 (10)
WO 2001-CA47 20010124
PRAI KR 1999-34362 19990829
DT Utility
FS APPLICATION
LN.CNT 1376
INCL INCLM: 435/368.000
INCLS: 435/371.000
NCL NCLM: 435/368.000
NCLS: 435/371.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 144 OF 305 USPATFULL on STN
AN 2004:44224 USPATFULL
TI Pluripotent embryonic-like stem cells, compositions, methods and uses thereof
IN Young, Henry E., Macon, GA, UNITED STATES
Lucas, Paul A., Poughkeepsie, NY, UNITED STATES
PI US 2004033214 A1 20040219
AI US 2003-443663 A1 20030522 (10)
RLI Continuation of Ser. No. US 1999-404895, filed on 24 Sep 1999, ABANDONED
DT Utility
FS APPLICATION
LN.CNT 7392
INCL INCLM: 424/093.700
INCLS: 435/366.000; 435/368.000
NCL NCLM: 424/093.700
NCLS: 435/366.000; 435/368.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 145 OF 305 USPATFULL on STN
AN 2004:38730 USPATFULL
TI Promoter-based isolation, purification, expansion, and transplantation of neuronal progenitor cells, oligodendrocyte progenitor cells, or ***neural*** ***stem*** ***cells*** from a population of embryonic stem cells
IN Goldman, Steven A., South Salem, NY, UNITED STATES
Roy, Neeta Singh, New York, NY, UNITED STATES
PI US 2004029269 A1 20040212
AI US 2003-430822 A1 20030506 (10)
PRAI US 2002-378802P 20020507 (60)
DT Utility
FS APPLICATION
LN.CNT 1037
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 146 OF 305 USPATFULL on STN
AN 2004:19358 USPATFULL
TI Modulation of ***neural*** ***stem*** ***cells*** and neural progenitor cells
IN Lindquist, Per, Staltradsvagen 21, SWEDEN
Mercer, Alex, Staltradsvagen 15, SWEDEN
Ronnholm, Harriet, Tornslingen 8, ltr, SWEDEN
Wikstrom, Lilian, Stjarnfallsvagen 9, SWEDEN
PI US 2004014662 A1 20040122
AI US 2003-434943 A1 20030508 (10)
PRAI US 2002-379114P 20020508 (60)

DT UTILITY
FS APPLICATION
LN.CNT 3175
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
IC [7]
ICM: A61K038-17

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 147 OF 305 USPATFULL on STN
AN 2004:18908 USPATFULL
TI Methods for inducing differentiation of embryonic stem cells and uses thereof
IN Jessell, Thomas M., Bronx, NY, UNITED STATES
Wichterle, Hynek, New York, NY, UNITED STATES
Lieberam, Ivo, New York, NY, UNITED STATES
PI US 2004014210 A1 20040122
AI US 2002-196882 A1 20020716 (10)
DT Utility
FS APPLICATION
LN.CNT 2548
INCL INCLM: 435/368.000
INCLS: 435/354.000; 514/012.000; 514/559.000
NCL NCLM: 435/368.000
NCLS: 435/354.000; 514/012.000; 514/559.000
IC [7]
ICM: C12N005-06
ICS: C12N005-08; A61K038-17; A61K031-203
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 148 OF 305 USPATFULL on STN
AN 2004:15026 USPATFULL
TI Pharmaceutical composition comprising ribavirin and growth factors and methods of use
IN Guillemin, Roger C., La Jolla, CA, United States
Gage, Fred Harrison, La Jolla, CA, United States
Ray, Jasodhara, San Diego, CA, United States
PA The Salk Institute for Biological Studies, La Jolla, CA, United States (U.S. corporation)
PI US 6680292 B1 20040120
AI US 2001-856100 20010924 (9)
PRAI US 1998-109308P 19981120 (60)
DT Utility
FS GRANTED
LN.CNT 1267
INCL INCLM: 514/002.000
INCLS: 514/027.000; 514/043.000; 514/045.000; 514/046.000; 530/397.000;
530/399.000
NCL NCLM: 514/002.000
NCLS: 514/027.000; 514/043.000; 514/045.000; 514/046.000; 530/397.000;
530/399.000
IC [7]
ICM: A61K031-70
ICS: A61K038-00; A61K038-24; C07H019-056; C07H005-06
EXF 514/2; 514/27; 514/43; 514/45; 514/46; 514/824; 514/878; 514/879;
530/397; 530/399; 536/28.6; 536/28.7; 536/29.1
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 149 OF 305 USPATFULL on STN
AN 2004:13073 USPATFULL
TI Oligodendrocytes derived from human embryonic stem cells for remyelination and treatment of spinal cord injury
IN Keirstead, Hans S., Irvine, CA, UNITED STATES
Nistor, Gabriel I., Placentia, CA, UNITED STATES
PI US 2004009593 A1 20040115
AI US 2003-406817 A1 20030404 (10)
PRAI US 2002-395382P 20020711 (60)
DT Utility
FS APPLICATION
LN.CNT 1704
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 150 OF 305 USPATFULL on STN
AN 2004:7427 USPATFULL
TI Potential growth factors from the human tumour cell line ht 1080
IN Minger, Stephen L., London, UNITED KINGDOM
Adams, Gregor, London, UNITED KINGDOM
Francis, Paul, London, UNITED KINGDOM
Mcclure, Myra, London, UNITED KINGDOM
PI US 2004005661 A1 20040108
AI US 2003-344503 A1 20030708 (10)
WO 2001-GB3523 20010806
PRAI GB 2000-19705 20000810
DT Utility
FS APPLICATION
LN.CNT 1664
INCL INCLM: 435/069.100
INCLS: 435/226.000; 435/320.100; 435/366.000; 530/350.000; 536/023.200
NCL NCLM: 435/069.100
NCLS: 435/226.000; 435/320.100; 435/366.000; 530/350.000; 536/023.200
IC [7]
ICM: C12N009-64
ICS: C07H021-04; C12N005-08; C07K014-47; C12P021-02
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 151 OF 305 USPATFULL on STN
AN 2004:4397 USPATFULL
TI Therapeutic uses for mesenchymal stromal cells
IN Tennekoon, Gihan, Wynnewood, PA, United States
Coyle, Andrew J., Philadelphia, PA, United States
Grinspan, Judith, Ardmore, PA, United States
Beesley, Jackie S., West Sussex, UNITED KINGDOM
PA The Children's Hospital of Philadelphia, Philadelphia, PA, United States
(U.S. corporation)
PI US 6673606 B1 20040106
AI US 2001-833066 20010412 (9)
PRAI US 2000-196473P 20000412 (60)
US 2000-242673P 20001024 (60)
DT Utility
FS GRANTED
LN.CNT 1101
INCL INCLM: 435/372.000
INCLS: 435/325.000; 435/366.000; 435/368.000; 435/377.000; 424/093.100
NCL NCLM: 435/372.000
NCLS: 424/093.100; 435/325.000; 435/366.000; 435/368.000; 435/377.000
IC [7]
ICM: C12N005-08
EXF 424/93.2; 424/93.1; 435/325; 435/368; 435/375; 435/377; 435/391;
435/372; 435/366
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 152 OF 305 USPATFULL on STN
AN 2003:334688 USPATFULL
TI Placental derived stem cells and uses thereof
IN Strom, Stephen C., Allison Park, PA, UNITED STATES
Miki, Toshio, Pittsburgh, PA, UNITED STATES
PI US 2003235563 A1 20031225
AI US 2003-420656 A1 20030421 (10)
PRAI US 2002-374172P 20020419 (60)
DT Utility
FS APPLICATION
LN.CNT 1968
INCL INCLM: 424/093.210
INCLS: 435/370.000
NCL NCLM: 424/093.210
NCLS: 435/370.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 153 OF 305 USPATFULL on STN
AN 2003:320406 USPATFULL
TI Cancer models
IN Bachoo, Robert M., Roslindale, MA, UNITED STATES
Depinho, Ronald A., Brookline, MA, UNITED STATES
PI US 2003226159 A1 20031204

PRAI US 2002-373139P 20020416 (60)
US 2002-374791P 20020422 (60)

DT Utility
FS APPLICATION

LN.CNT 1230

INCL INCLM: 800/018.000
INCLS: 435/354.000
NCL NCLM: 800/018.000
NCLS: 435/354.000

IC [7]
ICM: A01K067-027
ICS: C12N005-06

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 154 OF 305 USPATFULL on STN

AN 2003:318602 USPATFULL

TI Screening assays for identifying differentiation-inducing agents and production of differentiated cells for cell therapy

IN West, Michael D., Southborough, MA, UNITED STATES

Page, Raymond, Southbridge, MA, UNITED STATES

Scholer, Hans, Kennett Square, PA, UNITED STATES

Chapman, Karen, SouthBorough, MA, UNITED STATES

PA Advanced Cell Technology, Worcester, MA (U.S. corporation)

PI US 2003224345 A1 20031204

AI US 2002-227282 A1 20020826 (10)

PRAI US 2001-314316P 20010824 (60)

DT Utility

FS APPLICATION

LN.CNT 2674

INCL INCLM: 435/004.000

INCLS: 435/366.000; 435/353.000; 435/354.000; 435/350.000; 435/351.000

NCL NCLM: 435/004.000

NCLS: 435/366.000; 435/353.000; 435/354.000; 435/350.000; 435/351.000

IC [7]

ICM: C12Q001-00

ICS: C12N005-06; C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 155 OF 305 USPATFULL on STN

AN 2003:318332 USPATFULL

TI Composition for the protection and regeneration of nerve cells containing the extract of Scutellaria Radix

IN Choe, Byung-Kil, Seo-gu, KOREA, REPUBLIC OF

Kim, Yun-Hee, Seoul, KOREA, REPUBLIC OF

Kim, Soo-Kyung, Jung-gu, KOREA, REPUBLIC OF

Lim, Jung-Su, Seoul, KOREA, REPUBLIC OF

Kim, Hyo-Sup, Namdong-gu, KOREA, REPUBLIC OF

Park, Dae-Sung, Seoul, KOREA, REPUBLIC OF

Chang, Chi-Young, Bucheon-si, KOREA, REPUBLIC OF

PA EUGENBIO INC., Asan-si, KOREA, REPUBLIC OF (non-U.S. corporation)

PI US 2003224074 A1 20031204

AI US 2003-389677 A1 20030314 (10)

RLI Continuation of Ser. No. WO 2002-KR1315, filed on 11 Jul 2002, UNKNOWN

PRAI KR 2001-41688 20010711

KR 2002-40184 20020711

DT Utility

FS APPLICATION

LN.CNT 1045

INCL INCLM: 424/741.000

NCL NCLM: 424/741.000

IC [7]

ICM: A61K035-78

L6 ANSWER 156 OF 305 USPATFULL on STN

AN 2003:318230 USPATFULL

TI Myelination of congenitally dysmyelinated forebrains using oligodendrocyte progenitor cells

IN Goldman, Steven A., South Salem, NY, UNITED STATES

Roy, Neeta Singh, New York, NY, UNITED STATES

Windrem, Martha, New York, NY, UNITED STATES

PI US 2003223972 A1 20031204

AI US 2003-368810 A1 20030214 (10)

PRAI US 2002-358006P 20020215 (60)

DT Utility

FS APPLICATION

INCL INCLM: 424/093.210
INCLS: 435/368.000; 435/456.000; 435/459.000; 435/458.000
NCL NCLM: 424/093.210
NCLS: 435/368.000; 435/456.000; 435/459.000; 435/458.000

IC [7]
ICM: A61K048-00
ICS: C12N005-08; C12N015-86; C12N015-88; C12N015-87
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 157 OF 305 USPATFULL on STN
AN 2003:312300 USPATFULL

TI Novel mammalian multipotent stem cells and compositions, methods of preparation and methods of administration thereof
IN Sugaya, Kiminobu, Willow Springs, IL, UNITED STATES
Qu, Tingyu, Chicago, IL, UNITED STATES
Vaghani, Ankur V., Chicago, IL, UNITED STATES
Brannen, Christopher, Vancouver, WA, UNITED STATES
Kim, Hojoong M., Chicago, IL, UNITED STATES
Pulido, Jose S., Brookfield, WI, UNITED STATES
Dong, Xiajing, Oak Park, IL, UNITED STATES
PI US 2003219898 A1 20031127
AI US 2003-345126 A1 20030114 (10)
PRAI US 2002-348473P 20020114 (60)
US 2002-357783P 20020219 (60)
US 2002-376257P 20020429 (60)
US 2002-381138P 20020508 (60)
US 2002-404361P 20020819 (60)
US 2002-430381P 20021202 (60)

DT Utility
FS APPLICATION

LN.CNT 3255
INCL INCLM: 435/455.000
INCLS: 435/366.000
NCL NCLM: 435/455.000
NCLS: 435/366.000

IC [7]
ICM: C12N005-08
ICS: C12N015-85

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 158 OF 305 USPATFULL on STN
AN 2003:300379 USPATFULL

TI Reprogramming cells for enhanced differentiation capacity using pluripotent stem cells
IN Earp, David J., Oakland, CA, UNITED STATES
Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Gold, Joseph D., San Francisco, CA, UNITED STATES
Lebkowski, Jane S., Portola Valley, CA, UNITED STATES
Schiff, J. Michael, Menlo Park, CA, UNITED STATES

PI US 2003211603 A1 20031113
AI US 2003-344680 A1 20030212 (10)
WO 2001-US25493 20010814

DT Utility
FS APPLICATION

LN.CNT 1597
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 159 OF 305 USPATFULL on STN
AN 2003:299866 USPATFULL

TI Neutral progenitor cells from hippocampal tissue and a method for isolating and purifying them
IN Goldman, Steven A., South Salem, NY, UNITED STATES
PI US 2003211087 A1 20031113
AI US 2002-181329 A1 20021023 (10)
WO 2001-US1780 20010118

DT Utility
FS APPLICATION

LN.CNT 1199
INCL INCLM: 424/093.210
INCLS: 435/368.000; 435/456.000
NCL NCLM: 424/093.210

IC

[7]
ICM: A61K048-00

ICS: C12N005-08; C12N015-861

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 160 OF 305 USPATFULL on STN

AN 2003:289443 USPATFULL

TI Electrically responsive promoter system

IN Padua, Rodolfo A., Richfield, MN, UNITED STATES

Schu, Carl A., Plymouth, MN, UNITED STATES

Bonner, Matthew D., Plymouth, MN, UNITED STATES

Donovan, Maura G., St. Paul, MN, UNITED STATES

Soykan, Orhan, Houghton, MI, UNITED STATES

PA Medtronic, Inc. (U.S. corporation)

PI US 2003204206 A1 20031030

AI US 2001-27655 A1 20011220 (10)

PRAI US 2000-257460P 20001221 (60)

US 2001-313926P 20010820 (60)

DT Utility

FS APPLICATION

LN.CNT 2221

INCL INCLM: 607/002.000

NCL NCLM: 607/002.000

IC [7]

ICM: A61N001-36

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 161 OF 305 USPATFULL on STN

AN 2003:285185 USPATFULL

TI Isolated mammalian ***neural*** ***stem*** ***cells***

methods of making such cells

IN Steindler, Dennis A., Memphis, TN, United States

Laywell, Eric D., Memphis, TN, United States

Kukekou, Valery G., Memphis, TN, United States

Thomas, L. Brannon, Johnson City, TN, United States

PA University of Tennessee Research Foundation, United States (U.S. corporation)

PI US 6638763 B1 20031028

WO 9830678 19980716

AI US 1999-402227 19991001 (9)

WO 1998-US366 19980107

PRAI US 1997-34910P 19970107 (60)

DT Utility

FS GRANTED

LN.CNT 974

INCL INCLM: 435/368.000

INCLS: 435/377.000; 435/384.000; 435/325.000

NCL NCLM: 435/368.000

NCLS: 435/325.000; 435/377.000; 435/384.000

IC [7]

ICM: C12N005-08

EXF 435/325; 435/377; 435/378; 435/379; 435/383; 435/384; 435/395; 435/402; 435/368

L6 ANSWER 162 OF 305 USPATFULL on STN

AN 2003:283103 USPATFULL

TI Enhancing neurotrophin-induced neurogenesis by endogenous neural progenitor cells by concurrent overexpression of brain derived neurotrophic factor and an inhibitor of a pro-gliogenic bone morphogenetic protein

IN Goldman, Steven A., South Salem, NY, UNITED STATES

Chmielnicki, Eva, New York, NY, UNITED STATES

Economides, Aris, Tarrytown, NY, UNITED STATES

PI US 2003199447 A1 20031023

AI US 2003-368809 A1 20030214 (10)

PRAI US 2002-358005P 20020215 (60)

DT Utility

FS APPLICATION

LN.CNT 1728

INCL INCLM: 514/012.000

INCLS: 514/044.000; 424/093.200

NCL NCLM: 514/012.000

NCLS: 514/044.000; 424/093.200

IC [7]

ICM: A61K048-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 163 OF 305 USPATFULL on STN
AN 2003:282633 USPATFULL
TI Novel human G-protein coupled receptor, HGPRBMY14, related to the orphan
GPCR, GPR73
IN Feder, John N., Belle Mead, NJ, UNITED STATES
Ramanathan, Chandra S., Wallingford, CT, UNITED STATES
Nelson, Thomas C., Lawrenceville, NJ, UNITED STATES
Kornacker, Michael G., Princeton, NJ, UNITED STATES
Ryseck, Rolf-Peter, Ewing, CT, UNITED STATES
Cacace, Angela, Clinton, CT, UNITED STATES
Barber, Lauren E., Higganum, CT, UNITED STATES
Bol, David K., Gaithersburg, MD, UNITED STATES
PI US 2003198976 A1 20031023
AI US 2002-295693 A1 20021114 (10)
RLI Continuation-in-part of Ser. No. US 2002-67649, filed on 5 Feb 2002,
PENDING
PRAI US 2001-266525P 20010205 (60)
US 2001-329897P 20011016 (60)
DT Utility
FS APPLICATION
LN.CNT 15175
INCL INCLM: 435/006.000
INCLS: 435/069.100; 435/320.100; 435/325.000; 530/350.000; 536/023.500;
514/044.000
NCL NCLM: 435/006.000
NCLS: 435/069.100; 435/320.100; 435/325.000; 530/350.000; 536/023.500;
514/044.000
IC [7]
ICM: C12Q001-68
ICS: C07H021-04; C12P021-02; C12N005-06; A61K048-00; C07K014-705
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 164 OF 305 USPATFULL on STN
AN 2003:276702 USPATFULL
TI Phenotypic screen of chimeric proteins
IN Kim, Jin-Soo, Yuseong-gu, KOREA, REPUBLIC OF
Park, Kyung-Soon, Yuseong-gu, KOREA, REPUBLIC OF
Lee, Dong-Ki, Yuseong-gu, KOREA, REPUBLIC OF
Seol, Wongi, Yuseong-gu, KOREA, REPUBLIC OF
Lee, Horim, Chungcheongnam-do, KOREA, REPUBLIC OF
Lee, Seong-Il, Yuseong-gu, KOREA, REPUBLIC OF
Yang, Hyo-Young, Yuseong-gu, KOREA, REPUBLIC OF
Lee, Yangsoon, Yuseong-gu, KOREA, REPUBLIC OF
Jang, Young-Soon, Yuseong-gu, KOREA, REPUBLIC OF
PI US 2003194727 A1 20031016
AI US 2002-314669 A1 20021209 (10)
PRAI US 2001-338441P 20011207 (60)
US 2002-376053P 20020426 (60)
US 2002-400904P 20020802 (60)
US 2002-401089P 20020805 (60)
DT Utility
FS APPLICATION
LN.CNT 5577
INCL INCLM: 435/006.000
INCLS: 435/069.100; 435/320.100; 435/325.000; 435/252.300; 435/007.200;
435/254.200; 435/219.000
NCL NCLM: 435/006.000
NCLS: 435/069.100; 435/320.100; 435/325.000; 435/252.300; 435/007.200;
435/254.200; 435/219.000
IC [7]
ICM: C12Q001-68
ICS: G01N033-53; G01N033-567; C12N001-18; C12P021-02; C12N001-21;
C12N005-06
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 165 OF 305 USPATFULL on STN
AN 2003:238119 USPATFULL
TI Cultures of human CNS ***neural*** ***stem*** ***cells***
IN Carpenter, Melissa, Foster City, CA, UNITED STATES
PI US 2003166276 A1 20030904
AI US 2002-328644 A1 20021223 (10)
RLI Division of Ser. No. US 2000-486302, filed on 16 Oct 2000, GRANTED, Pat.
No. US 6498018

FS APPLICATION

LN.CNT 1035

INCL INCLM: 435/368.000

NCL NCLM: 435/368.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 166 OF 305 USPATFULL on STN

AN 2003:237328 USPATFULL

TI Functional role and potential therapeutic use of Reelin, Gas6 and Protein S in relation to adult neural stem or progenitor cells

IN Bertilsson, Goran, Vasterhaninge, SWEDEN

Falk, Anna, Solna, SWEDEN

Frisen, Jonas, Stockholm, SWEDEN

Heidrich, Jessica, Arsta, SWEDEN

Hellstrom, Kristina, Sodertalje, SWEDEN

Kortesmaa, Jarkko, Stockholm, SWEDEN

Lindquist, Per, Bromma, SWEDEN

Lundh, Hanna, Solna, SWEDEN

McGuire, Jacqueline, Huddinge, SWEDEN

Mercer, Alex, Bromma, SWEDEN

Patrone, Cesare, Hagersten, SWEDEN

Ronnholm, Harriet, Trangsund, SWEDEN

Wikstrom, Lilian, Spanga, SWEDEN

Zachrisson, Olof, Spanga, SWEDEN

PI US 2003165485 A1 20030904

AI US 2002-291171 A1 20021108 (10)

PRAI US 2001-344725P 20011109 (60)

US 2002-393263P 20020702 (60)

US 2001-345064P 20011109 (60)

US 2002-394397P 20020708 (60)

DT Utility

FS APPLICATION

LN.CNT 3554

INCL INCLM: 424/094.600

INCLS: 424/146.100

NCL NCLM: 424/094.600

NCLS: 424/146.100

IC [7]

ICM: A61K038-46

ICS: A61K039-395

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 167 OF 305 USPATFULL on STN

AN 2003:231620 USPATFULL

TI Cultures, products and methods using stem cells

IN Weiss, Mark L., Manhattan, KS, UNITED STATES

Troyer, Deryl L., Manhattan, KS, UNITED STATES

Davis, Duane, Westmoreland, KS, UNITED STATES

Mitchell, Kathy E., Manhattan, KS, UNITED STATES

PA Kansas State University Research Foundation (U.S. corporation)

PI US 2003161818 A1 20030828

AI US 2002-83779 A1 20020225 (10)

DT Utility

FS APPLICATION

LN.CNT 1447

INCL INCLM: 424/093.210

INCLS: 435/372.000; 514/044.000; 435/368.000

NCL NCLM: 424/093.210

NCLS: 435/372.000; 514/044.000; 435/368.000

IC [7]

ICM: A61K048-00

ICS: C12N005-08

L6 ANSWER 168 OF 305 USPATFULL on STN

AN 2003:231619 USPATFULL

TI Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

IN Young, Henry E., Macon, GA, UNITED STATES

Lucas, Paul A., Poughkeepsie, NY, UNITED STATES

PI US 2003161817 A1 20030828

AI US 2001-820320 A1 20010328 (9)

DT Utility

FS APPLICATION

INCL INCLM: 424/093.210
INCLS: 435/366.000
NCL NCLM: 424/093.210
NCLS: 435/366.000

IC [7]
ICM: A61K048-00
ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 169 OF 305 USPATFULL on STN
AN 2003:228267 USPATFULL

TI Progenitor cells and methods and uses related thereto
IN Lu, Kuanghui, Brookline, MA, United States

Pang, Kevin, Canton, MA, United States

Rubin, Lee, Wellesley, MA, United States

PA ES Cell International Pte Ltd., SINGAPORE (non-U.S. corporation)

PI US 6610535 B1 20030826

AI US 2000-724632 20001128 (9)

RLI Continuation-in-part of Ser. No. US 2000-635370, filed on 9 Aug 2000
Continuation-in-part of Ser. No. US 2000-499362, filed on 10 Feb 2000,
now patented, Pat. No. US 6326201

DT Utility

FS GRANTED

LN.CNT 3624

INCL INCLM: 435/325.000

INCLS: 435/363.000; 435/366.000; 435/372.200; 435/375.000; 435/377.000;
435/384.000; 435/387.000; 435/391.000; 435/392.000

NCL NCLM: 435/325.000

NCLS: 435/363.000; 435/366.000; 435/372.200; 435/375.000; 435/377.000;
435/384.000; 435/387.000; 435/391.000; 435/392.000

IC [7]

ICM: C12N005-00

ICS: C12N005-06

EXF 435/325; 435/363; 435/366; 435/372.2; 435/375; 435/377; 435/384;
435/387; 435/391; 435/392

L6 ANSWER 170 OF 305 USPATFULL on STN

AN 2003:213877 USPATFULL

TI Generation of hematopoietic cells from multipotent neutral stem cells
IN Bjornson, Christopher R., Calgary, CANADA

Rietze, Rod L., Calgary, CANADA

Reynolds, Brent A., Saltspring, CANADA

Vescovi, Angelo L., Milan, ITALY

PA Neurosoheres Holdings Ltd. (non-U.S. corporation)

PI US 2003148515 A1 20030807

AI US 2003-371779 A1 20030221 (10)

RLI Continuation of Ser. No. US 2000-594938, filed on 15 Jun 2000, ABANDONED
Continuation of Ser. No. US 1998-100679, filed on 19 Jun 1998, GRANTED,
Pat. No. US 6093531

PRAI US 1997-60289P 19970929 (60)

DT Utility

FS APPLICATION

LN.CNT 1058

INCL INCLM: 435/368.000

INCLS: 435/372.000

NCL NCLM: 435/368.000

NCLS: 435/372.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 171 OF 305 USPATFULL on STN

AN 2003:213875 USPATFULL

TI Novel mammalian multipotent ***neural*** ***stem***
cells and compositions, methods of preparation and methods of
administration thereof

IN Sugaya, Kiminobu, Willow Springs, IL, UNITED STATES

Qu, Tingyu, Chicago, IL, UNITED STATES

Pulido, Jose S., Brookfield, WI, UNITED STATES

PI US 2003148513 A1 20030807

AI US 2003-342616 A1 20030114 (10)

PRAI US 2002-348473P 20020114 (60)

US 2002-357783P 20020219 (60)

US 2002-376257P 20020429 (60)

US 2002-381138P 20020508 (60)

US 2002-430381P 20021202 (60)

DT Utility

FS APPLICATION

LN.CNT 2081

INCL INCLM: 435/368.000

NCL NCLM: 435/368.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 172 OF 305 USPATFULL on STN

AN 2003:207379 USPATFULL

TI Long-term cell-culture compositions and genetically modified animals derived therefrom

IN Morrison, John Roderick, Carnegie, AUSTRALIA

Hayes, Eric Shannon, Victoria, CANADA

Pera, Martin Frederick, Prahran, AUSTRALIA

Lacham-Kaplan, Orly, East Bentleigh, AUSTRALIA

Trounson, Alan Osborne, Ashburton, AUSTRALIA

PA MONASH UNIVERSITY, VICTORIA, AUSTRALIA (non-U.S. corporation)

PI US 2003143737 A1 20030731

AI US 2000-732520 A1 20001207 (9)

PRAI AU 1999-4495 19991207

AU 2000-9242 20000807

AU 2000-1108 20001031

AU 2000-1109 20001031

DT Utility

FS APPLICATION

LN.CNT 1188

INCL INCLM: 435/368.000

NCL NCLM: 435/368.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 173 OF 305 USPATFULL on STN

AN 2003:201423 USPATFULL

TI Use of modified pyrimidine compounds to promote stem cell migration and proliferation

IN Sugaya, Kiminobu, Willow Springs, IL, UNITED STATES

Qu, Tingyu, Chicago, IL, UNITED STATES

PI US 2003139410 A1 20030724

AI US 2003-341683 A1 20030114 (10)

PRAI US 2002-348473P 20020114 (60)

US 2002-357783P 20020219 (60)

US 2002-376257P 20020429 (60)

US 2002-381138P 20020508 (60)

US 2002-404361P 20020819 (60)

US 2002-430381P 20021202 (60)

DT Utility

FS APPLICATION

LN.CNT 1928

INCL INCLM: 514/228.500

INCLS: 514/234.200; 514/252.160

NCL NCLM: 514/228.500

NCLS: 514/234.200; 514/252.160

IC [7]

ICM: A61K031-541

ICS: A61K031-5377; A61K031-519

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 174 OF 305 USPATFULL on STN

AN 2003:194602 USPATFULL

TI Cell production

IN Rathjen, Peter David, Mircham, AUSTRALIA

Rathjen, Joy, Mircham, AUSTRALIA

PI US 2003134413 A1 20030717

AI US 2002-181359 A1 20021203 (10)

WO 2001-AU30 20010112

PRAI AU 2000-5098 20000114

AU 2000-7045 20000420

DT Utility

FS APPLICATION

LN.CNT 2263

INCL INCLM: 435/368.000

IC

[7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 175 OF 305 USPATFULL on STN
 AN 2003:172722 USPATFULL
 TI Compositions and methods for isolation, propagation, and differentiation
 of human stem cells and uses thereof
 IN Neuman, Toomas, Santa Monica, CA, UNITED STATES
 Levesque, Michel, Beverly Hills, CA, UNITED STATES
 PI US 2003118566 A1 20030626
 AI US 2002-216677 A1 20020808 (10)
 PRAI US 2001-310727P 20010808 (60)
 US 2001-312714P 20010816 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 1836
 INCL INCLM: 424/093.210
 INCLS: 424/093.700; 435/368.000
 NCL NCLM: 424/093.210
 NCLS: 424/093.700; 435/368.000
 IC [7]
 ICM: A61K048-00
 ICS: C12N005-08

L6 ANSWER 176 OF 305 USPATFULL on STN
 AN 2003:166513 USPATFULL
 TI Polynucleotide encoding a novel human potassium channel beta-subunit,
 K_{beta}M3
 IN Feder, John N., Belle Mead, NJ, UNITED STATES
 Lee, Liana, North Brunswick, NJ, UNITED STATES
 Chen, Jian, Princeton, NJ, UNITED STATES
 Jackson, Donald, Lawrenceville, NJ, UNITED STATES
 Ramanathan, Chandra S., Wallingford, CT, UNITED STATES
 Siemers, Nathan O., Pennington, NJ, UNITED STATES
 Chang, Han, Princeton Junction, NJ, UNITED STATES
 Ryseck, Rolf-Peter, Ewing, NJ, UNITED STATES
 Watson, Andrew J., West Windsor, NJ, UNITED STATES
 Carroll, Pamela, Princeton, NJ, UNITED STATES
 PI US 2003114371 A1 20030619
 AI US 2002-71458 A1 20020207 (10)
 PRAI US 2001-267039P 20010207 (60)
 US 2001-281224P 20010403 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 13661
 INCL INCLM: 514/012.000
 INCLS: 530/350.000; 536/023.500; 435/069.100; 435/320.100; 435/325.000
 NCL NCLM: 514/012.000
 NCLS: 530/350.000; 536/023.500; 435/069.100; 435/320.100; 435/325.000
 IC [7]
 ICM: A61K038-17
 ICS: C07K014-435; C12P021-02; C12N005-06; C07H021-04
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 177 OF 305 USPATFULL on STN
 AN 2003:166013 USPATFULL
 TI Human FGF gene and gene expression products
 IN Cen, Hui, Alameda, CA, UNITED STATES
 Garcia, Pablo D., San Francisco, CA, UNITED STATES
 Grieshammer, Uta, San Francisco, CA, UNITED STATES
 Kassam, Altaf, Alameda, CA, UNITED STATES
 Lee, Pauline P., Contra Costa, CA, UNITED STATES
 Pot, David, San Francisco, CA, UNITED STATES
 Gospodarowicz, Denis, Contra Costa, CA, UNITED STATES
 Martin, Kathleen, Alameda, CA, UNITED STATES
 PI US 2003113869 A1 20030619
 AI US 2001-836960 A1 20010417 (9)
 RLI Division of Ser. No. US 1999-264851, filed on 8 Mar 1999, PENDING
 PRAI WO 1999-US5235 19990309
 US 1998-77411P 19980309 (60)
 US 1998-83553P 19980429 (60)
 DT Utility
 FS APPLICATION
 LN.CNT 1738

NCL INCLS: 435/325.000; 435/252.300; 435/254.100; 536/023.500; 530/399.000
NCLM: 435/069.400
NCLS: 435/325.000; 435/252.300; 435/254.100; 536/023.500; 530/399.000
[7]
IC ICM: C07H021-04
ICS: C12N001-18; C12N001-21; C12N005-06; C12P021-02; C07K014-50
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 178 OF 305 USPATFULL on STN
AN 2003:159426 USPATFULL
TI Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations
IN Buck, David W., Heathfield, UNITED KINGDOM
Uchida, Nobuko, Palo Alto, CA, UNITED STATES
Weissman, Irving, Redwood City, CA, UNITED STATES
PI US 2003109039 A1 20030612
AI US 2002-193049 A1 20020711 (10)
RLI Continuation-in-part of Ser. No. US 1999-422844, filed on 21 Oct 1999, GRANTED, Pat. No. US 6468794
PRAI US 2001-339337P 20011105 (60)
US 1999-119725P 19990212 (60)
DT Utility
FS APPLICATION
LN.CNT 1524
INCL INCLM: 435/368.000
INCLS: 435/007.210
NCL NCLM: 435/368.000
NCLS: 435/007.210
IC [7]
ICM: G01N033-567
ICS: C12N005-08

L6 ANSWER 179 OF 305 USPATFULL on STN
AN 2003:159424 USPATFULL
TI Methods for application of genetically-modified endogenous or exogenous stem/progenitor or their progeny for treatment of disease
IN Reid, Christopher Brian, Alexandria, VA, UNITED STATES
Pack, Svetlana, Gaithersburg, MD, UNITED STATES
PI US 2003109037 A1 20030612
AI US 2002-252544 A1 20020924 (10)
PRAI US 2001-324362P 20010924 (60)
DT Utility
FS APPLICATION
LN.CNT 895
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 180 OF 305 USPATFULL on STN
AN 2003:159395 USPATFULL
TI Methods of making cDNA libraries
IN Weiss, Samuel, Alberta, CANADA
Reynolds, Brent, Alberta, CANADA
Hammang, Joseph P., Barrington, RI, UNITED STATES
Baetge, E. Edward, Barrington, RI, UNITED STATES
PI US 2003109008 A1 20030612
AI US 2002-199830 A1 20020719 (10)
RLI Continuation of Ser. No. US 1995-486313, filed on 7 Jun 1995, GRANTED, Pat. No. US 6497872 Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994, ABANDONED Continuation of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED Continuation of Ser. No. US 1995-385404, filed on 7 Feb 1995, ABANDONED Continuation of Ser. No. US 1992-961813, filed on 16 Oct 1992, ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser. No. US 1994-359945, filed on 20 Dec 1994, ABANDONED Continuation of Ser. No. US 1994-221655, filed on 1 Apr 1994, ABANDONED Continuation of Ser. No. US 1992-967622, filed on 28 Oct 1992, ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser. No. US 1995-376062, filed on 20 Jan 1995, ABANDONED Continuation of Ser. No. US 1993-10829, filed on 29 Jan 1993, ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser. No. US 1993-149508,

1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part or Ser. No. US 1994-311099, filed on 23 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser. No. US 1994-338730, filed on 14 Nov 1994, ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED

DT Utility

FS APPLICATION

LN.CNT 3873

INCL INCLM: 435/091.100

INCLS: 435/368.000

NCL NCLM: 435/091.100

NCLS: 435/368.000

IC [7]

ICM: C12P019-34

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 181 OF 305 USPATFULL on STN

AN 2003:153329 USPATFULL

TI Multi-lineage directed induction of bone marrow stromal cell differentiation

IN Black, Ira B., Skillman, NY, UNITED STATES

Woodbury, Dale, Piscataway, NJ, UNITED STATES

PI US 2003104997 A1 20030605

AI US 2001-946325 A1 20010905 (9)

DT Utility

FS APPLICATION

LN.CNT 2016

INCL INCLM: 514/012.000

INCLS: 435/372.000; 514/044.000

NCL NCLM: 514/012.000

NCLS: 435/372.000; 514/044.000

IC [7]

ICM: A61K038-18

ICS: A61K048-00; C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 182 OF 305 USPATFULL on STN

AN 2003:152953 USPATFULL

TI Hypoxia-mediated neurogenesis

IN Weiss, Samuel, Calgary, CANADA

Sorokan, S. Todd, Victoria, CANADA

PI US 2003104619 A1 20030605

AI US 2002-335477 A1 20021231 (10)

RLI Continuation of Ser. No. US 2002-95727, filed on 12 Mar 2002, ABANDONED
Continuation of Ser. No. US 2000-742484, filed on 20 Dec 2000, GRANTED,
Pat. No. US 6368854 Continuation of Ser. No. US 1998-175890, filed on 20 Oct 1998, GRANTED, Pat. No. US 6165783

PRAI US 1997-63040P 19971024 (60)

DT Utility

FS APPLICATION

LN.CNT 372

INCL INCLM: 435/377.000

NCL NCLM: 435/377.000

IC [7]

ICM: C12N005-00

ICS: C12N005-02

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 183 OF 305 USPATFULL on STN

AN 2003:146311 USPATFULL

TI Novel human G-protein coupled receptor, HGPRBMY14, related to the orphan GPCR, GPR73

IN Feder, John N., Belle Mead, NJ, UNITED STATES

Ramanathan, Chandra S., Wallingford, CT, UNITED STATES

Nelson, Thomas C., Lawrenceville, NJ, UNITED STATES

Kornacker, Michael, Princeton, NJ, UNITED STATES

Ryseck, Rolf-Peter, Ewing, NJ, UNITED STATES

Cacace, Angela, Clinton, CT, UNITED STATES

Barber, Lauren E., Jewett City, CT, UNITED STATES

PI US 2003100057 A1 20030529

AI US 2002-67649 A1 20020205 (10)

PRAI US 2001-266525P 20010205 (60)

US 2001-329897P 20011016 (60)

DT Utility

LN.CNT 14451
INCL INCLM: 435/069.100
INCLS: 435/183.000; 435/320.100; 435/325.000; 536/023.200; 530/350.000
NCL NCLM: 435/069.100
NCLS: 435/183.000; 435/320.100; 435/325.000; 536/023.200; 530/350.000
IC [7]
ICM: C12P021-02
ICS: C12N005-06; C07K014-435; C07H021-04
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 184 OF 305 USPATFULL on STN
AN 2003:140423 USPATFULL
TI Multi-parameter high throughput screening assays (MPHTS)
IN Altar, C. Anthony, Garrett Park, MD, UNITED STATES
Brockman, Jeffrey A., Frederick, MD, UNITED STATES
Evans, David, N. Potomac, MD, UNITED STATES
Hook, Derek, Gaithersburg, MD, UNITED STATES
Klimczak, Leszek J., Gaithersburg, MD, UNITED STATES
Laeng, Pascal, Washington, DC, UNITED STATES
Palfreyman, Michael, Annapolis, MD, UNITED STATES
Rajan, Prithi, Rockville, MD, UNITED STATES
PA Psychiatric Genomics, Inc. (U.S. corporation)
PI US 2003096264 A1 20030522
AI US 2002-175523 A1 20020618 (10)
PRAI US 2001-299151P 20010618 (60)
US 2001-317828P 20010907 (60)
US 2001-325150P 20010925 (60)
US 2001-333047P 20011114 (60)
US 2002-349936P 20020118 (60)
US 2002-361834P 20020304 (60)
DT Utility
FS APPLICATION
LN.CNT 3339
INCL INCLM: 435/006.000
INCLS: 702/020.000
NCL NCLM: 435/006.000
NCLS: 702/020.000
IC [7]
ICM: C12Q001-68
ICS: G06F019-00; G01N033-48; G01N033-50
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 185 OF 305 USPATFULL on STN
AN 2003:140116 USPATFULL
TI Methods of proliferating undifferentiated neural cells
IN Weiss, Samuel, Alberta, CANADA
Reynolds, Brent, Alberta, CANADA
Hammang, Joseph P., Barrington, RI, UNITED STATES
Baetge, E. Edward, Barrington, RI, UNITED STATES
PI US 2003095956 A1 20030522
AI US 2002-199918 A1 20020719 (10)
RLI Continuation of Ser. No. US 1995-486313, filed on 7 Jun 1995, PENDING
Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994,
ABANDONED Continuation of Ser. No. US 1991-726812, filed on 8 Jul 1991,
ABANDONED Continuation-in-part of Ser. No. US 1995-385404, filed on 7
Feb 1995, ABANDONED Continuation of Ser. No. US 1992-961813, filed on 16
Oct 1992, ABANDONED Continuation-in-part of Ser. No. US 1991-726812,
filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser. No. US
1994-359945, filed on 20 Dec 1994, ABANDONED Continuation of Ser. No. US
1994-221655, filed on 1 Apr 1994, ABANDONED Continuation of Ser. No. US
1992-967622, filed on 28 Oct 1992, ABANDONED Continuation-in-part of
Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED Continuation of
Ser. No. US 1993-10829, filed on 29 Jan 1993, ABANDONED
Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991,
ABANDONED Continuation-in-part of Ser. No. US 1993-149508, filed on 9
Nov 1993, ABANDONED Continuation-in-part of Ser. No. US 1991-726812,
filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser. No. US
1994-311099, filed on 23 Sep 1994, ABANDONED Continuation-in-part of
Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED
Continuation-in-part of Ser. No. US 1994-338730, filed on 14 Nov 1994,
ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8
Jul 1991, ABANDONED
DT Utility
FS APPLICATION
LN.CNT 3838

NCL INCLS: 435/368.000
NCLM: 424/093.210
NCLS: 435/368.000

IC [7]
ICM: A61K048-00
ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 186 OF 305 USPATFULL on STN

AN 2003:134091 USPATFULL
TI Ependymal ***neural*** ***stem*** ***cells*** and method for
their isolation

IN Janson, Ann Marie, Stockholm, SWEDEN
Frisen, Jonas, Stockholm, SWEDEN
Johansson, Clas, Stockholm, SWEDEN
Momma, Stefan, Spinga, SWEDEN
Clarke, Diana, Cambridge, MA, UNITED STATES
Zhao, Ming, Solna, SWEDEN
Lendahl, Urban, Stockholm, SWEDEN
Delfani, Kioumars, Solna, SWEDEN

PA NeuroNova AB

PI US 2003092176 A1 20030515

AI US 2002-183728 A1 20020627 (10)

RLL Continuation of Ser. No. US 2001-719001, filed on 12 Jul 2001, ABANDONED
A 371 of International Ser. No. WO 1999-SE1157, filed on 24 Jun 1999,
UNKNOWN

PRAI SE 1998-2264 19980625

DT Utility

FS APPLICATION

LN.CNT 1758

INCL INCLM: 435/368.000

NCL NCLM: 435/368.000

IC [7]

ICM: C12N005-08

L6 ANSWER 187 OF 305 USPATFULL on STN

AN 2003:120321 USPATFULL

TI METHOD FOR ***NEURAL*** ***STEM*** ***CELL***

DIFFERENTIATION USING 5HT1A AGONISTS

IN Rajan, Prithi, Dr., 106 Lynch Street, Rockville, Maryland, UNITED
STATES 20850

Altar, C. Anthony, Mr., 1110 Kenilworth Avenue, Garrett Park,
Maryland, UNITED STATES 20896

PA Psychiatric Genomics, Inc., Gaithersburg, 20878, UNITED STATES, Maryland
(U.S. corporation)

PI US 2003082802 A1 20030501

AI US 2002-175360 A1 20020618 (10)

PRAI US 2001-60299152 20010618

DT Utility

FS APPLICATION

LN.CNT 1784

INCL INCLM: 435/368.000

INCLS: 514/001.000

NCL NCLM: 435/368.000

NCLS: 514/001.000

IC [7]

ICM: C12N005-08

ICS: C12Q001-68; A61K031-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 188 OF 305 USPATFULL on STN

AN 2003:119670 USPATFULL

TI Stem cells of the islets of langerhans and their use in treating
diabetes mellitus

IN Habener, Joel F., Newton Centre, MA, UNITED STATES

Zulewski, Henryk, Basel, SWITZERLAND

Thomas, Melissa K., Boston, MA, UNITED STATES

Abraham, Elizabeth J., Quincy, MA, UNITED STATES

Vallejo, Mario, Madrid, SPAIN

Leech, Colin A., Boston, MA, UNITED STATES

Nolan, Anna Louise, Brookline, MA, UNITED STATES

Lechner, Andreas, Boston, MA, UNITED STATES

PI US 2003082155 A1 20030501

AI US 2002-120687 A1 20020411 (10)

RLL Continuation-in-part of Ser. No. US 2000-731261, filed on 6 Dec 2000,

PRAI 2001, PENDING
US 1999-169082P 19991206 (60)

DT Utility

FS APPLICATION

LN.CNT 3060

INCL INCLM: 424/093.210

INCLS: 435/366.000

NCL NCLM: 424/093.210

NCLS: 435/366.000

IC [7]

ICM: A61K048-00

ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 189 OF 305 USPATFULL on STN

AN 2003:119667 USPATFULL

TI Adipose-derived stem cells and lattices

IN Hedrick, Marc H., Encino, CA, UNITED STATES

Katz, Adam J., Charlottesville, VA, UNITED STATES

Llull, Ramon, Mallorca, SPAIN

Futrell, J. William, Pittsburgh, PA, UNITED STATES

Benhaim, Prosper, Encino, CA, UNITED STATES

Lorenz, Hermann Peter, Belmont, CA, UNITED STATES

Zhu, Min, Los Angeles, CA, UNITED STATES

PI US 2003082152 A1 20030501

AI US 2001-952522 A1 20010910 (9)

RLI Continuation-in-part of Ser. No. WO 2000-US6232, filed on 10 Mar 2000,
UNKNOWN

PRAI US 1999-123711P 19990310 (60)

US 1999-162462P 19991029 (60)

DT Utility

FS APPLICATION

LN.CNT 6443

INCL INCLM: 424/093.210

INCLS: 435/366.000

NCL NCLM: 424/093.210

NCLS: 435/366.000

IC [7]

ICM: A61K048-00

ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 190 OF 305 USPATFULL on STN

AN 2003:86333 USPATFULL

TI Trans-differentiation and re-differentiation of somatic cells and
production of cells for cell therapies

IN Page, Raymond, Southbridge, MA, UNITED STATES

Dominko, Tanja, Southbridge, MA, UNITED STATES

Malcuit, Christopher, Hudson, MA, UNITED STATES

PI US 2003059939 A1 20030327

AI US 2002-228296 A1 20020827 (10)

PRAI US 2001-314654P 20010827 (60)

DT Utility

FS APPLICATION

LN.CNT 1215

INCL INCLM: 435/366.000

INCLS: 435/368.000; 435/372.000

NCL NCLM: 435/366.000

NCLS: 435/368.000; 435/372.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 191 OF 305 USPATFULL on STN

AN 2003:85811 USPATFULL

TI Cell populations which co-express CD49c and CD90

IN Ho, Tony W., Berwyn, PA, UNITED STATES

Kopen, Gene C., Wynnewood, PA, UNITED STATES

Righter, William F., Ridley Park, PA, UNITED STATES

Rutkowski, J. Lynn, Wynnewood, PA, UNITED STATES

Wagner, Joseph, West Chester, PA, UNITED STATES

PI US 2003059414 A1 20030327

AI US 2001-960244 A1 20010921 (9)

DT Utility

FS APPLICATION

INCL INCLM: 424/093.210
INCLS: 435/368.000; 435/366.000
NCL NCLM: 424/093.210
NCLS: 435/368.000; 435/366.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08

L6 ANSWER 192 OF 305 USPATFULL on STN
AN 2003:79048 USPATFULL
TI Methods and compositions for the repair and/or regeneration of damaged myocardium
IN Anversa, Piero, New York, NY, UNITED STATES
PI US 2003054973 A1 20030320
AI US 2002-162796 A1 20020605 (10)
RLI Continuation-in-part of Ser. No. US 2001-919732, filed on 31 Jul 2001,
PENDING
PRAI US 2001-295807P 20010606 (60)
US 2001-295806P 20010606 (60)
US 2001-295805P 20010606 (60)
US 2001-295804P 20010606 (60)
US 2001-295803P 20010606 (60)
DT Utility
FS APPLICATION
LN.CNT 3875
INCL INCLM: 514/001.000
INCLS: 435/372.000
NCL NCLM: 514/001.000
NCLS: 435/372.000
IC [7]
ICM: A61K031-00
ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 193 OF 305 USPATFULL on STN
AN 2003:71553 USPATFULL
TI Combined regulation of neural cell production
IN Thompson, Bradley G., Calgary, CANADA
Weiss, Samuel, Calgary, CANADA
Shingo, Tetsuro, Okayama, JAPAN
PA Stem Cell Therapeutics Inc., Calgary, CANADA (3)
PI US 2003049838 A1 20030313
AI US 2002-231493 A1 20020830 (10)
PRAI US 2001-316365P 20010830 (60)
US 2001-316579P 20010831 (60)
US 2001-322514P 20010914 (60)
US 2002-386404P 20020607 (60)
DT Utility
FS APPLICATION
LN.CNT 1119
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 194 OF 305 USPATFULL on STN
AN 2003:71552 USPATFULL
TI In vitro and in vivo proliferation and use of multipotent ***neural***
stem ***cells*** and their progeny
IN Weiss, Samuel, Alberta, CANADA
Reynolds, Brent, Alberta, CANADA
Hammang, Joseph P., Barrington, RI, UNITED STATES
Baetge, E. Edward, Barrington, RI, UNITED STATES
PI US 2003049837 A1 20030313
AI US 2001-925911 A1 20010809 (9)
RLI Continuation of Ser. No. US 1995-484203, filed on 7 Jun 1995, GRANTED,
Pat. No. US 6399369 Continuation-in-part of Ser. No. US 1994-270412,
filed on 5 Jul 1994, ABANDONED Continuation of Ser. No. US 1991-726812,
filed on 8 Jul 1991, ABANDONED Continuation of Ser. No. US 1995-385404,
filed on 7 Feb 1995, ABANDONED Continuation of Ser. No. US 1992-961813,
filed on 16 Oct 1992, ABANDONED Continuation-in-part of Ser. No. US
1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser.
No. US 1994-359945, filed on 20 Dec 1994, ABANDONED Continuation of Ser.
No. US 1994-221655, filed on 1 Apr 1994, ABANDONED Continuation of Ser.

or Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED
Continuation-in-part of Ser. No. US 1995-376062, filed on 20 Jan 1995,
ABANDONED Continuation of Ser. No. US 1993-10829, filed on 29 Jan 1993,
ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8
Jul 1991, ABANDONED Continuation-in-part of Ser. No. US 1993-149508,
filed on 9 Nov 1993, ABANDONED Continuation-in-part of Ser. No. US
1991-726812, filed on 8 Jul 1991, ABANDONED Continuation-in-part of Ser.
No. US 1994-311099, filed on 23 Sep 1994, ABANDONED Continuation-in-part
of Ser. No. US 1991-726812, filed on 8 Jul 1991, ABANDONED
Continuation-in-part of Ser. No. US 1994-338730, filed on 14 Nov 1994,
ABANDONED Continuation-in-part of Ser. No. US 1991-726812, filed on 8
Jul 1991, ABANDONED

DT Utility

FS APPLICATION

LN.CNT 4025

INCL INCLM: 435/368.000

INCLS: 435/384.000

NCL NCLM: 435/368.000

NCLS: 435/384.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 195 OF 305 USPATFULL on STN

AN 2003:57546 USPATFULL

TI Differentiated cells suitable for human therapy

IN Gold, Joseph D., San Francisco, CA, UNITED STATES

Lebkowski, Jane S., Portola Valley, CA, UNITED STATES

PI US 2003040111 A1 20030227

AI US 2002-141220 A1 20020507 (10)

RLI Division of Ser. No. US 2001-783203, filed on 13 Feb 2001, PENDING
Continuation of Ser. No. WO 2001-US44309, filed on 26 Nov 2001, UNKNOWN

PRAI US 2000-253443P 20001127 (60)
US 2000-253357P 20001127 (60)

DT Utility

FS APPLICATION

LN.CNT 3280

INCL INCLM: 435/368.000

INCLS: 435/370.000; 435/366.000

NCL NCLM: 435/368.000

NCLS: 435/370.000; 435/366.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 196 OF 305 USPATFULL on STN

AN 2003:57459 USPATFULL

TI Isolation of ***neural*** ***stem*** ***cells*** using
gangliosides and other surface markers

IN Klassen, Henry, Pasadena, CA, UNITED STATES

Schwartz, Michael, Garden Grove, CA, UNITED STATES

Young, Michael J., Gloucester, MA, UNITED STATES

PI US 2003040023 A1 20030227

AI US 2002-128009 A1 20020422 (10)

PRAI US 2001-285407P 20010420 (60)

DT Utility

FS APPLICATION

LN.CNT 1388

INCL INCLM: 435/007.210

INCLS: 435/368.000

NCL NCLM: 435/007.210

NCLS: 435/368.000

IC [7]

ICM: G01N033-567

ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 197 OF 305 USPATFULL on STN

AN 2003:51564 USPATFULL

TI Identification of cells for transplantation

IN Price, Jack, London, UNITED KINGDOM

Uwanogho, Dafe, London, UNITED KINGDOM

PI US 2003036522 A1 20030220

AI US 2002-140463 A1 20020506 (10)

RLI Continuation of Ser. No. US 2000-696569, filed on 25 Oct 2000, PENDING

US 1999-170692P 19991214 (60)

DT Utility

FS APPLICATION

LN.CNT 517

INCL INCLM: 514/044.000

INCL INCLS: 435/006.000

NCL NCLM: 514/044.000

NCL NCLS: 435/006.000

IC [7]

ICM: C12Q001-68

ICS: A61K048-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 198 OF 305 USPATFULL on STN

AN 2003:51551 USPATFULL

TI TGF-alpha polypeptides, functional fragments and methods of use therefor

IN Twardzik, Daniel R., Bainbridge Island, WA, UNITED STATES

Pernet, Andre, Lake Forest, IL, UNITED STATES

Felker, Thomas S., Vashon, WA, UNITED STATES

Paskelli, Stefan, Bainbridge Island, WA, UNITED STATES

Reno, John M., Brier, WA, UNITED STATES

PI US 2003036509 A1 20030220

US 6677307 B2 20040113

AI US 2002-138158 A1 20020501 (10)

RLI Continuation-in-part of Ser. No. US 2000-641587, filed on 17 Aug 2000,
PENDING Continuation-in-part of Ser. No. US 2000-559248, filed on 26 Apr
2000, PENDING Continuation-in-part of Ser. No. US 1999-459813, filed on
13 Dec 1999, PENDING Continuation-in-part of Ser. No. US 1999-378567,
filed on 19 Aug 1999, ABANDONED

DT Utility

FS APPLICATION

LN.CNT 2915

INCL INCLM: 514/012.000

INCL INCLS: 530/399.000

NCL NCLM: 514/012.000

NCL NCLS: 530/300.000; 530/402.000

IC [7]

ICM: A61K038-18

ICS: C07K014-475

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 199 OF 305 USPATFULL on STN

AN 2003:44877 USPATFULL

TI Selective antibody targeting of undifferentiated stem cells

IN McWhir, Jim, Midlothian, UNITED KINGDOM

Gold, Joseph D., San Francisco, CA, UNITED STATES

Schiff, J. Michael, Menlo Park, CA, UNITED STATES

PI US 2003032187 A1 20030213

AI US 2001-995419 A1 20011126 (9)

PRAI US 2000-253357P 20001127 (60)

US 2000-253443P 20001127 (60)

US 2000-253395P 20001127 (60)

DT Utility

FS APPLICATION

LN.CNT 4177

INCL INCLM: 435/455.000

INCL INCLS: 435/366.000

NCL NCLM: 435/455.000

NCL NCLS: 435/366.000

IC [7]

ICM: C12N015-87

ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 200 OF 305 USPATFULL on STN

AN 2003:44871 USPATFULL

TI Production of radial glial cells

IN Weiss, Samuel, Calgary, CANADA

Gregg, Christopher, Calgary, CANADA

PA Stem Cell Therapeutics Inc., Calgary, AB, CANADA (non-U.S. corporation)

PI US 2003032181 A1 20030213

AI US 2002-196549 A1 20020717 (10)

PRAI CA 2001-2364095 20011130

US 2001-307096P 20010720 (60)

DT Utility

LN.CNT 1123
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 201 OF 305 USPATFULL on STN
AN 2003:44390 USPATFULL
TI Device and method for treating ophthalmic diseases
IN Hammang, Joseph P., Barrington, RI, UNITED STATES
Baetge, E. Edward, St. Sulpice, SWITZERLAND
Tsiarias, William G., Barrington, RI, UNITED STATES
Spear, Peter D., Boulder, CO, UNITED STATES
PI US 2003031700 A1 20030213
US 6649184 B2 20031118
AI US 2002-224521 A1 20020820 (10)
RLI Continuation of Ser. No. US 2001-973325, filed on 9 Oct 2001, GRANTED,
Pat. No. US 6436427 Continuation of Ser. No. US 1999-155066, filed on 27
Apr 1999, GRANTED, Pat. No. US 6299895 A 371 of International Ser. No.
WO 1997-US4701, filed on 24 Mar 1997, PENDING Continuation-in-part of
Ser. No. US 1996-620982, filed on 22 Mar 1996, GRANTED, Pat. No. US
5904144

DT Utility
FS APPLICATION

LN.CNT 911
INCL INCLM: 424/424.000
INCLS: 604/890.100
NCL NCLM: 424/427.000
NCLS: 623/004.100
IC [7]
ICM: A61K009-22
ICS: A61F002-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 202 OF 305 USPATFULL on STN
AN 2003:44347 USPATFULL
TI Stem cells and their use in transplantation
IN Habener, Joel F., Newton Centre, MA, UNITED STATES
Zulewski, Henryk, Basel, SWITZERLAND
Abraham, Elizabeth J., Quincy, MA, UNITED STATES
Vallejo, Mario, Madrid, SPAIN
Faustman, Denise L., Weston, MA, UNITED STATES
Thomas, Melissa K., Boston, MA, UNITED STATES
PA Massachusetts General Hospital (U.S. corporation)
PI US 2003031657 A1 20030213
AI US 2002-136891 A1 20020502 (10)
RLI Continuation-in-part of Ser. No. US 2000-731255, filed on 6 Dec 2000,
PENDING
PRAI US 1999-169082P 19991206 (60)
US 2000-215109P 20000628 (60)
US 2000-238880P 20001006 (60)

DT Utility
FS APPLICATION

LN.CNT 2495
INCL INCLM: 424/093.210
INCLS: 424/093.700
NCL NCLM: 424/093.210
NCLS: 424/093.700
IC [7]
ICM: A61K048-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 203 OF 305 USPATFULL on STN
AN 2003:30314 USPATFULL
TI Co-factors for trophic factors, and methods of use, thereof
IN Gage, Fred Harrison, La Jolla, CA, UNITED STATES
Taupin, Philippe J., La Jolla, CA, UNITED STATES
Ray, Jasodhara, San Diego, CA, UNITED STATES
PI US 2003022261 A1 20030130
AI US 2002-225322 A1 20020820 (10)
RLI Division of Ser. No. US 1999-459958, filed on 13 Dec 1999, GRANTED, Pat.
No. US 6436389 Continuation-in-part of Ser. No. US 1998-210344, filed on
11 Dec 1998, ABANDONED
DT Utility

LN.CNT 1910
INCL INCLM: 435/007.230
INCLS: 514/008.000; 530/322.000
NCL NCLM: 435/007.230
NCLS: 514/008.000; 530/322.000
IC [7]
ICM: G01N033-574
ICS: A61K038-16; C07K009-00; A61K038-14
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 204 OF 305 USPATFULL on STN
AN 2003:23749 USPATFULL
TI Culture system for rapid expansion of human embryonic stem cells
IN Mandalam, Ramkumar, Union City, CA, UNITED STATES
Xu, Chunhui, Cupertino, CA, UNITED STATES
Gold, Joseph D., San Francisco, CA, UNITED STATES
Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
PI US 2003017589 A1 20030123
AI US 2002-235094 A1 20020904 (10)
RLI Continuation-in-part of Ser. No. US 2000-530346, filed on 29 Aug 2000,
PENDING A 371 of International Ser. No. WO 1998-US22619, filed on 23 Oct
1998, PENDING
PRAI WO 2001-US1030 20010110
US 2000-175581P 20000111 (60)
US 2000-213740P 20000622 (60)
US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
DT Utility
FS APPLICATION
LN.CNT 1741
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 205 OF 305 USPATFULL on STN
AN 2003:17441 USPATFULL
TI Method of producing region-specific ***neurons*** from human
neuronal stem cells
IN Wu, Ping, League City, TX, UNITED STATES
PI US 2003013193 A1 20030116
AI US 2002-176971 A1 20020619 (10)
PRAI US 2001-300344P 20010622 (60)
DT Utility
FS APPLICATION
LN.CNT 1375
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 206 OF 305 USPATFULL on STN
AN 2003:17440 USPATFULL
TI Method for ***neural*** ***stem*** ***cell***
differentiation using valproate
IN Laeng, Pascal, Washington, DC, UNITED STATES
Mallon, Barbara, Gaithersburg, MD, UNITED STATES
Pitts, Lee, Falls Church, VA, UNITED STATES
PA Psychiatric Genomics, Inc. (U.S. corporation)
PI US 2003013192 A1 20030116
AI US 2002-175168 A1 20020618 (10)
PRAI US 2001-299066P 20010618 (60)
DT Utility
FS APPLICATION
LN.CNT 1725
INCL INCLM: 435/368.000
INCLS: 514/557.000
NCL NCLM: 435/368.000
NCLS: 514/557.000
IC [7]
ICM: C12N005-08
ICS: A61K031-19

L6 ANSWER 207 OF 305 USPATFULL on STN
AN 2003:3539 USPATFULL
TI Multipotent stem cells from peripheral tissues and uses thereof
IN Toma, Jean, Montreal, CANADA
Akhavan, Mahnaz, Montreal, CANADA
Fernandes, Karl J. L., Montreal, CANADA
Fortier, Mathieu, Orford, CANADA
Miller, Freda, Montreal, CANADA
PI US 2003003574 A1 20030102
AI US 2002-99539 A1 20020315 (10)
RLI Continuation-in-part of Ser. No. US 2001-991480, filed on 9 Nov 2001,
PENDING Continuation-in-part of Ser. No. US 2001-916639, filed on 26 Jul
2001, PENDING Continuation-in-part of Ser. No. WO 2001-CA47, filed on 24
Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2000-670049, filed
on 25 Sep 2000, PENDING Continuation-in-part of Ser. No. US 2000-490422,
filed on 24 Jan 2000, ABANDONED

DT Utility
FS APPLICATION
LN.CNT 2354
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 208 OF 305 USPATFULL on STN
AN 2003:3443 USPATFULL
TI Identifying and characterizing genes
IN Depinho, Ronald A., Brookline, MA, UNITED STATES
Chin, Lynda, Brookline, MA, UNITED STATES
PI US 2003003478 A1 20030102
AI US 2002-112503 A1 20020328 (10)
PRAI US 2001-279506P 20010328 (60)

DT Utility
FS APPLICATION
LN.CNT 1891
INCL INCLM: 435/006.000
INCLS: 435/455.000
NCL NCLM: 435/006.000
NCLS: 435/455.000
IC [7]
ICM: C12Q001-68
ICS: C12N015-85

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 209 OF 305 USPATFULL on STN
AN 2002:340140 USPATFULL
TI Neural transplantation using proliferated multipotent ***neural***
stem ***cells*** and their progeny
IN Weiss, Samuel, Alberta, CANADA
Reynolds, Brent, Alberta, CANADA
Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, Barrington, RI, United States
PA NeuroSpheres Holdings Ltd., Calgary, CANADA (non-U.S. corporation)
PI US 6497872 B1 20021224
AI US 1995-486313 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994,
now abandoned Continuation of Ser. No. US 1991-726812, filed on 8 Jul
1991, now abandoned Continuation of Ser. No. US 486313
Continuation-in-part of Ser. No. US 1995-385404, filed on 7 Feb 1995,
now abandoned Continuation of Ser. No. US 1992-961813, filed on 16 Oct
1992, now abandoned Continuation-in-part of Ser. No. US 726812
Continuation-in-part of Ser. No. US 486313 Continuation-in-part of Ser.
No. US 1994-359945, filed on 20 Dec 1994, now abandoned Continuation of
Ser. No. US 1994-221655, filed on 1 Apr 1994, now abandoned Continuation
of Ser. No. US 1992-967622, filed on 28 Oct 1992, now abandoned
Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991,
now abandoned Continuation-in-part of Ser. No. US 486313
Continuation-in-part of Ser. No. US 1995-376062, filed on 20 Jan 1995,
now abandoned Continuation of Ser. No. US 1993-10829, filed on 29 Jan
1993, now abandoned Continuation-in-part of Ser. No. US 726812
Continuation-in-part of Ser. No. US 486313 Continuation-in-part of Ser.
No. US 1993-149508, filed on 9 Nov 1993, now abandoned
Continuation-in-part of Ser. No. US 726812 Continuation-in-part of Ser.

23 Sep 1994, now abandoned Continuation-in-part of Ser. No. US 726812
Continuation-in-part of Ser. No. US 486313 Continuation-in-part of Ser.
No. US 1994-338730, filed on 14 Nov 1994, now abandoned
Continuation-in-part of Ser. No. US 726812

DT Utility

FS GRANTED

LN.CNT 4223

INCL INCLM: 424/093.100

INCLS: 424/093.200; 424/093.210

NCL NCLM: 424/093.100

NCLS: 424/093.200; 424/093.210

IC [7]

ICM: A01N063-00

ICS: A01N065-00; A61K048-00

EXF 424/93.1; 424/93.2; 424/93.21; 514/44

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 210 OF 305 USPATFULL on STN

AN 2002:337936 USPATFULL

TI TGF-alpha polypeptides, functional fragments and methods of use therefor
IN Twardzik, Daniel R., Bainbridge Island, WA, UNITED STATES

Pernet, Andre, Lake Forest, IL, UNITED STATES

Felker, Thomas S., Vashon, WA, UNITED STATES

Paskell, Stefan, Bainbridge Island, WA, UNITED STATES

PA Stem Cell Pharmaceuticals, Inc. (U.S. corporation)

PI US 2002193301 A1 20021219

AI US 2002-39119 A1 20020104 (10)

RLI Continuation of Ser. No. US 2000-641587, filed on 17 Aug 2000, PENDING
Continuation-in-part of Ser. No. US 2000-492935, filed on 27 Jan 2000,
PENDING Continuation-in-part of Ser. No. US 1999-378567, filed on 19 Aug
1999, PENDING

DT Utility

FS APPLICATION

LN.CNT 2673

INCL INCLM: 514/012.000

NCL NCLM: 514/012.000

IC [7]

ICM: A61K038-18

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 211 OF 305 USPATFULL on STN

AN 2002:337457 USPATFULL

TI Production of tyrosine hydroxylase positive ***neurons***

IN Weiss, Samuel, Calgary, CANADA

Shingo, Tetsuro, Okayama, JAPAN

PI US 2002192817 A1 20021219

AI US 2002-118167 A1 20020409 (10)

PRAI US 2001-282918P 20010411 (60)

DT Utility

FS APPLICATION

LN.CNT 855

INCL INCLM: 435/368.000

NCL NCLM: 435/368.000

IC [7]

ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 212 OF 305 USPATFULL on STN

AN 2002:322037 USPATFULL

TI Dopaminergic neuronal survival-promoting factors and uses thereof

IN Commissiong, John W., Mississauga, CANADA

Raibekas, Andrei A., Toronto, CANADA

PI US 2002182198 A1 20021205

AI US 2002-102265 A1 20020320 (10)

PRAI US 2001-277516P 20010320 (60)

DT Utility

FS APPLICATION

LN.CNT 1426

INCL INCLM: 424/094.100

INCLS: 435/183.000; 435/069.100; 435/320.100; 435/368.000; 536/023.200

NCL NCLM: 424/094.100

NCLS: 435/183.000; 435/069.100; 435/320.100; 435/368.000; 536/023.200

IC [7]

ICM: A61K038-43

ICS: C07H021-04; C12N009-00; C12N005-08; C12P021-02

L6 ANSWER 213 OF 305 USPATFULL on STN
AN 2002:301574 USPATFULL
TI TGF-alpha polypeptides, functional fragments and methods of use therefor
IN Twardzik, Daniel R., Bainbridge Island, WA, UNITED STATES
Pernet, Andre, Lake Forest, IL, UNITED STATES
Felker, Thomas S., Vashon, WA, UNITED STATES
Paskell, Stefan, Bainbridge Island, WA, UNITED STATES
PI US 2002169119 A1 20021114
US 6815418 B2 20041109
AI US 2001-932172 A1 20010817 (9)
RLI Continuation-in-part of Ser. No. US 2000-641587, filed on 17 Aug 2000,
PENDING Continuation-in-part of Ser. No. US 2000-492935, filed on 27 Jan
2000, PENDING Continuation-in-part of Ser. No. US 1999-378567, filed on
19 Aug 1999, PENDING
DT Utility
FS APPLICATION
LN.CNT 2472
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
NCLS: 514/866.000; 530/300.000; 530/324.000
IC [7]
ICM: A61K038-18
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 214 OF 305 USPATFULL on STN
AN 2002:301557 USPATFULL
TI Intranasal delivery of agents for regulating development of implanted
cells in the CNS
IN Frey, William H., II, White Bear, MN, UNITED STATES
PI US 2002169102 A1 20021114
AI US 2002-114385 A1 20020402 (10)
PRAI US 2001-281062P 20010403 (60)
DT Utility
FS APPLICATION
LN.CNT 2177
INCL INCLM: 514/001.000
INCLS: 435/368.000
NCL NCLM: 514/001.000
NCLS: 435/368.000
IC [7]
ICM: A61K031-00
ICS: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 215 OF 305 USPATFULL on STN
AN 2002:301223 USPATFULL
TI Method of isolating human neuroepithelial precursor cells from human
fetal tissue
IN Mayer-Proschel, Margot, Pittsford, NY, UNITED STATES
Rao, Mahendra S., Salt Lake City, UT, UNITED STATES
Tresco, Patrick A., Sandy, UT, UNITED STATES
Messina, Darin J., Salt Lake City, UT, UNITED STATES
PI US 2002168767 A1 20021114
AI US 2001-813429 A1 20010321 (9)
DT Utility
FS APPLICATION
LN.CNT 829
INCL INCLM: 435/368.000
INCLS: 800/008.000
NCL NCLM: 435/368.000
NCLS: 800/008.000
IC [7]
ICM: C12N005-08
ICS: A01K067-00

L6 ANSWER 216 OF 305 USPATFULL on STN
AN 2002:301222 USPATFULL
TI Genetically altered human pluripotent stem cells
IN Gold, Joseph D., San Francisco, CA, UNITED STATES
Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Inokuma, Margaret S., San Jose, CA, UNITED STATES
Xu, Chunhui, Cupertino, CA, UNITED STATES
PI US 2002168766 A1 20021114
AI US 2001-849022 A1 20010504 (9)

US 2000-213740P 20000622 (60)
US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
US 2000-257608P 20001222 (60)

DT Utility
FS APPLICATION

LN.CNT 2640

INCL INCLM: 435/366.000
INCLS: 435/455.000
NCL NCLM: 435/366.000
NCLS: 435/455.000

IC [7]
ICM: C12N005-08
ICS: C12N015-87

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 217 OF 305 USPATFULL on STN
AN 2002:295167 USPATFULL
TI Estrogen induced ***neural*** ***stem*** ***cell*** increase
IN Weiss, Samuel, Calgary, CANADA
PA Neurostasis, Inc., CALGARY, CANADA, T2N 1X7 (non-U.S. corporation)
PI US 2002165213 A1 20021107
AI US 2002-84671 A1 20020228 (10)
PRAI US 2001-272941P 20010302 (60)

DT Utility
FS APPLICATION

LN.CNT 553

INCL INCLM: 514/182.000
INCLS: 435/368.000; 435/006.000
NCL NCLM: 514/182.000
NCLS: 435/368.000; 435/006.000

IC [7]
ICM: A61K031-56
ICS: C12N005-08; C12Q001-68

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 218 OF 305 USPATFULL on STN
AN 2002:294751 USPATFULL
TI Human cord blood derived unrestricted somatic stem cells (USSC)
IN Wernet, Peter, Duesseldorf, GERMANY, FEDERAL REPUBLIC OF
PI US 2002164794 A1 20021107
AI US 2001-985335 A1 20011102 (9)
PRAI US 2000-245168P 20001103 (60)

DT Utility
FS APPLICATION

LN.CNT 895

INCL INCLM: 435/372.000
NCL NCLM: 435/372.000
IC [7]
ICM: C12N005-08

L6 ANSWER 219 OF 305 USPATFULL on STN

AN 2002:294748 USPATFULL
TI Primitive ***neural*** ***stem*** ***cells*** and method for
differentiation of stem cells to neural cells
IN Van Der Kooy, Derek, Toronto, CANADA
Tropepe, Vincent, Boston, MA, UNITED STATES
PI US 2002164791 A1 20021107
AI US 2001-966768 A1 20010928 (9)
PRAI US 2000-236394P 20000929 (60)

DT Utility
FS APPLICATION

LN.CNT 2456

INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 220 OF 305 USPATFULL on STN

AN 2002:294276 USPATFULL
TI Ovarian hormone induced ***neural*** ***stem*** ***cell***
increase

PA Sningo, Tetsuro, Okayama, JAPAN
PI Neurostasis, Inc., CALGARY, AB, CANADA (non-U.S. corporation)
AI US 2002164314 A1 20021107
PRAI US 2002-84675 A1 20020228 (10)
DT Utility
FS APPLICATION
LN.CNT 586
INCL INCLM: 424/093.210
INCLS: 424/093.700; 435/368.000; 514/182.000
NCL NCLM: 424/093.210
NCLS: 424/093.700; 435/368.000; 514/182.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08; A61K031-56
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 221 OF 305 USPATFULL on STN
AN 2002:294269 USPATFULL
TI Stem cells of the islets of langerhans and their use in treating diabetes mellitus
IN Habener, Joel F., Newton Centre, MA, UNITED STATES
Zulewski, Henryk, Basel, SWITZERLAND
Thomas, Melissa K., Boston, MA, UNITED STATES
Abraham, Elizabeth J., Quincy, MA, UNITED STATES
Vallejo, Mario, Madrid, SPAIN
Leech, Colin A., Boston, MA, UNITED STATES
PI US 2002164307 A1 20021107
AI US 2001-963875 A1 20010926 (9)
RLI Continuation-in-part of Ser. No. US 2000-731261, filed on 6 Dec 2000,
PENDING
PRAI US 1999-169082P 19991206 (60)
US 2000-215109P 20000628 (60)
US 2000-238880P 20001006 (60)
DT Utility
FS APPLICATION
LN.CNT 2587
INCL INCLM: 424/093.700
INCLS: 424/093.210
NCL NCLM: 424/093.700
NCLS: 424/093.210
IC [7]
ICM: A61K048-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 222 OF 305 USPATFULL on STN
AN 2002:287579 USPATFULL
TI Method of characterizing potential therapeutics by determining cell-cell interactions
IN Elias, Kathleen A., San Francisco, CA, UNITED STATES
PI US 2002160442 A1 20021031
US 6599694 B2 20030729
AI US 2000-741721 A1 20001218 (9)
DT Utility
FS APPLICATION
LN.CNT 1604
INCL INCLM: 435/040.500
INCLS: 702/019.000
NCL NCLM: 435/004.000
NCLS: 435/007.230; 435/040.510
IC [7]
ICM: C12N005-00
ICS: G06F019-00; G01N033-48; G01N033-50; G01N001-30
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 223 OF 305 USPATFULL on STN
AN 2002:275940 USPATFULL
TI Enriched central nervous system stem cell and progenitor cell populations, and methods for identifying, isolating and enriching for such populations
IN Uchida, Nobuko, Palo Alto, CA, United States
Buck, David W., Santa Clara, CA, United States
Weissman, Irving, Redwood City, CA, United States
PA StemCells, Inc., Palo Alto, CA, United States (U.S. corporation)
PI US 6468794 B1 20021022

PRAI US 1999-119725P 19990212 (60)
DT Utility
FS GRANTED
LN.CNT 996
INCL INCLM: 435/368.000
INCLS: 435/343.000
NCL NCLM: 435/368.000
NCLS: 435/343.000
IC [7]
ICM: C12N005-08
EXF 435/332; 435/368; 435/343; 435/335; 424/93.7; 424/140.1; 424/153.1

L6 ANSWER 224 OF 305 USPATFULL on STN
AN 2002:273368 USPATFULL
TI Novel fibroblast growth factors
IN Bringmann, Peter W., Concord, CA, UNITED STATES
Faulds, Daryl, Mill Valley, CA, UNITED STATES
Mitrovic, Branislava, Walnut Creek, CA, UNITED STATES
Srinivasan, Subha, Greenbrae, CA, UNITED STATES
PI US 2002151496 A1 20021017
AI US 2001-5646 A1 20011207 (10)
PRAI US 2000-251837P 20001208 (60)
DT Utility
FS APPLICATION
LN.CNT 1488
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
IC [7]
ICM: A61K038-18

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 225 OF 305 USPATFULL on STN
AN 2002:272935 USPATFULL
TI Novel differentiation inducing process of embryonic stem cell to
ectodermal cell and its use
IN Sasai, Yoshiki, Kyoto, JAPAN
Nishikawa, Shin-Ichi, Kyoto, JAPAN
PI US 2002151056 A1 20021017
AI US 2001-855587 A1 20010516 (9)
PRAI JP 2000-144059 20000516
JP 2000-290819 20000925
US 2000-257049P 20001220 (60)
DT Utility
FS APPLICATION
LN.CNT 4056
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 226 OF 305 USPATFULL on STN
AN 2002:272932 USPATFULL
TI Direct differentiation of human pluripotent stem cells and
characterization of differentiated cells
IN Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Funk, Walter D., Hayward, CA, UNITED STATES
Thies, R. Scott, Pleasanton, CA, UNITED STATES
PI US 2002151053 A1 20021017
AI US 2002-87473 A1 20020301 (10)
RLI Continuation of Ser. No. US 2001-888309, filed on 21 Jun 2001, PENDING
PRAI US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
US 2000-213740P 20000622 (60)
DT Utility
FS APPLICATION
LN.CNT 2173
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 227 OF 305 USPATFULL on STN

T1 Identification or cells for transplantation
IN Price, Jack, London, UNITED KINGDOM
Uwanogho, Dafe, London, UNITED KINGDOM
PA Reneuron Limited, London, UNITED KINGDOM (non-U.S. corporation)
PI US 6465215 B1 20021015
AI US 2000-696569 20001025 (9)
PRAI US 1999-170692P 19991214 (60)
DT Utility
FS GRANTED
LN.CNT 558
INCL INCLM: 435/069.100
INCLS: 435/006.000; 435/091.200
NCL NCLM: 435/069.100
NCLS: 435/006.000; 435/091.200
IC [7]
ICM: C12P021-06
ICS: C12P019-34; C12Q001-68
EXF 435/69.1; 435/91.2; 435/368; 435/6
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 228 OF 305 USPATFULL on STN
AN 2002:251257 USPATFULL
TI Techniques for growth and differentiation of human pluripotent stem cells
IN Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Funk, Walter D., Hayward, CA, UNITED STATES
Gold, Joseph D., San Francisco, CA, UNITED STATES
Inokuma, Margaret S., San Jose, CA, UNITED STATES
Xu, Chunhui, Cupertino, CA, UNITED STATES
PI US 2002137204 A1 20020926
AI US 2001-39956 A1 20011023 (10)
RLI Continuation of Ser. No. US 2001-859291, filed on 16 May 2001, PENDING
PRAI WO 2001-US1030 20010110
US 2000-175581P 20000111 (60)
US 2000-213740P 20000622 (60)
US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
DT Utility
FS APPLICATION
LN.CNT 4058
INCL INCLM: 435/366.000
NCL NCLM: 435/366.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 229 OF 305 USPATFULL on STN
AN 2002:250771 USPATFULL
TI In vitro-derived adult pluripotent stem cells and uses therefor
IN Zahner, Joseph Edward, Saint Louis, MI, UNITED STATES
Sharda, Asutosh N., Saint Louis, MO, UNITED STATES
PA Nucleus Remodeling, Inc. (U.S. corporation)
PI US 2002136709 A1 20020926
AI US 2001-919298 A1 20010731 (9)
PRAI US 2000-254551P 20001212 (60)
DT Utility
FS APPLICATION
LN.CNT 1352
INCL INCLM: 424/093.210
INCLS: 435/455.000; 435/366.000
NCL NCLM: 424/093.210
NCLS: 435/455.000; 435/366.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08; C12N015-85
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 230 OF 305 USPATFULL on STN
AN 2002:228305 USPATFULL
TI TGF-alpha polypeptides, functional fragments and methods of use therefor
IN Twardzik, Daniel R., Bainbridge Island, WA, UNITED STATES
Pernet, Andre, Lake Forest, IL, UNITED STATES
Felker, Thomas S., Vashon, WA, UNITED STATES
Paskell, Stefan, Bainbridge Island, WA, UNITED STATES

PI US 2002123465 A1 20020905
AI US 2002-50190 A1 20020115 (10)
RLI Continuation of Ser. No. US 2000-641587, filed on 17 Aug 2000, PENDING
Continuation-in-part of Ser. No. US 2000-492935, filed on 27 Jan 2000,
PENDING Continuation-in-part of Ser. No. US 1999-378567, filed on 19 Aug
1999, PENDING

DT Utility
FS APPLICATION
LN.CNT 2684
INCL INCLM: 514/012.000
NCL NCLM: 514/012.000
IC [7]
ICM: A61K038-19
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 231 OF 305 USPATFULL on STN
AN 2002:227988 USPATFULL
TI Multipotent stem cells from peripheral tissues and uses thereof
IN Toma, Jean, Montreal, CANADA
Akhavan, Mahnaz, Montreal, CANADA
Fernandes, Karl J. L., Montreal, CANADA
Fortier, Mathieu, Orford, CANADA
Miller, Freda, Montreal, CANADA

PI US 2002123143 A1 20020905
AI US 2001-991480 A1 20011109 (9)
RLI Continuation-in-part of Ser. No. US 2001-916639, filed on 26 Jul 2001,
PENDING Continuation-in-part of Ser. No. WO 2001-CA47, filed on 24 Jan
2001, UNKNOWN Continuation-in-part of Ser. No. US 2000-670049, filed on
25 Sep 2000, PENDING Continuation-in-part of Ser. No. US 2000-490422,
filed on 24 Jan 2000, ABANDONED Continuation-in-part of Ser. No. US
1997-920272, filed on 22 Aug 1997, PENDING

DT Utility
FS APPLICATION
LN.CNT 2174
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 232 OF 305 USPATFULL on STN
AN 2002:221423 USPATFULL
TI Method for the isolation of stem cells by immuno-labeling with HLA/MHC
gene product marker
IN Avital, Itzhak, Los Angeles, CA, UNITED STATES
Arnaout, Walid, Calabasas, SWAZILAND
Inderbitzen, Daniel, Zurich, SWAZILAND

PI US 2002119564 A1 20020829
US 6828145 B2 20041207
AI US 2001-852458 A1 20010509 (9)
PRAI US 2000-202979P 200000510 (60)

DT Utility
FS APPLICATION
LN.CNT 948
INCL INCLM: 435/366.000
INCLS: 435/007.210
NCL NCLM: 435/325.000
NCLS: 435/326.000; 435/007.100
IC [7]
ICM: C12N005-08
ICS: G01N033-567
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 233 OF 305 USPATFULL on STN
AN 2002:221302 USPATFULL
TI Method of characterizing potential therapeutics by determining cell-cell
interactions
IN Elias, Kathleen A., San Francisco, CA, UNITED STATES
PA Cytokinetics, Inc., a Delaware Corporation (U.S. corporation)
PI US 2002119441 A1 20020829
AI US 2002-82036 A1 20020220 (10)
RLI Division of Ser. No. US 2000-741721, filed on 18 Dec 2000, PENDING
DT Utility
FS APPLICATION
LN.CNT 1620

NCL INCLS: 435/007.230; 702/019.000; 382/128.000
NCLM: 435/004.000
NCLS: 435/007.230; 702/019.000; 382/128.000
IC [7]
ICM: C12Q001-00
ICS: G01N033-574; G06K009-00; G06F019-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 234 OF 305 USPATFULL on STN
AN 2002:213833 USPATFULL
TI Engraftable neural progenitor & stem cells for brain tumor therapy
IN Snyder, Evan Y., Jamaica Plain, MA, UNITED STATES
Lynch, William P., Ravenna, OH, UNITED STATES
Breakefield, Xandra O., Newton, MA, UNITED STATES
Aboody, Karen, Needham, MA, UNITED STATES
PA Northeastern Ohio Universities of Medicine (U.S. corporation)
PI US 2002115213 A1 20020822
AI US 2001-939476 A1 20010823 (9)
RLI Continuation of Ser. No. US 1998-168350, filed on 7 Oct 1998, ABANDONED
Continuation-in-part of Ser. No. US 1998-133873, filed on 14 Aug 1998,
GRANTED, Pat. No. US 5958767
DT Utility
FS APPLICATION
LN.CNT 822
INCL INCLM: 435/368.000
INCLS: 424/093.210
NCL NCLM: 435/368.000
NCLS: 424/093.210
IC [7]
ICM: A61K048-00
ICS: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 235 OF 305 USPATFULL on STN
AN 2002:213415 USPATFULL
TI Cell implantation therapy for neurological diseases or disorders
IN Isacson, Ole, Cambridge, MA, UNITED STATES
Kim, Kwang Soo, Lexington, MA, UNITED STATES
PI US 2002114788 A1 20020822
AI US 2001-917126 A1 20010727 (9)
RLI Continuation-in-part of Ser. No. US 2000-626677, filed on 27 Jul 2000,
PENDING
DT Utility
FS APPLICATION
LN.CNT 1427
INCL INCLM: 424/093.210
INCLS: 435/368.000; 435/456.000
NCL NCLM: 424/093.210
NCLS: 435/368.000; 435/456.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08

L6 ANSWER 236 OF 305 USPATFULL on STN
AN 2002:209103 USPATFULL
TI Stimulation of cell proliferation by glycosylated cystatin C
IN Gage, Fred Harrison, La Jolla, CA, United States
Taupin, Philippe J., La Jolla, CA, United States
Ray, Jasodhara, San Diego, CA, United States
PA The Salk Institute for Biological Studies, La Jolla, CA, United States
(U.S. corporation)
PI US 6436389 B1 20020820
AI US 1999-459958 19991213 (9)
RLI Continuation-in-part of Ser. No. US 1998-210344, filed on 11 Dec 1998,
now abandoned
DT Utility
FS GRANTED
LN.CNT 1861
INCL INCLM: 424/085.100
INCLS: 424/198.100; 435/004.000; 435/325.000; 435/375.000; 435/377.000;
514/002.000; 514/012.000; 530/350.000; 530/399.000
NCL NCLM: 424/085.100
NCLS: 424/198.100; 435/004.000; 435/325.000; 435/375.000; 435/377.000;
514/002.000; 514/012.000; 530/350.000; 530/399.000
IC [7]

ICS: A61K045-00; C07K014-00; C12N005-00
EXF 424/198.1; 424/85.1; 435/325; 435/352; 435/366; 435/377; 435/4; 435/375;
514/2; 514/12; 530/300; 530/350; 530/399
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 237 OF 305 USPATFULL on STN
AN 2002:185672 USPATFULL
TI Hypoxia-mediated neurogenesis
IN Weiss, Samuel, Calgary, CANADA
Sorokan, S. Todd, Victoria, CANADA
PI US 2002098585 A1 20020725
AI US 2002-95727 A1 20020312 (10)
RLI Continuation of Ser. No. US 2000-742484, filed on 20 Dec 2000, GRANTED,
Pat. No. US 6368854 Continuation of Ser. No. US 1998-175890, filed on 20
Oct 1998, GRANTED, Pat. No. US 6165783
PRAI US 1997-63040P 19971024 (60)
DT Utility
FS APPLICATION
LN.CNT 371
INCL INCLM: 435/368.000
INCLS: 435/377.000
NCL NCLM: 435/368.000
NCLS: 435/377.000
IC [7]
ICM: C12N005-08
ICS: C12N005-00; C12N005-02
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 238 OF 305 USPATFULL on STN
AN 2002:185669 USPATFULL
TI Differentiated stem cells suitable for human therapy
IN Gold, Joseph D., San Francisco, CA, UNITED STATES
Lebkowski, Jane S., Portola Valley, CA, UNITED STATES
PI US 2002098582 A1 20020725
US 6576464 B2 20030610
AI US 2001-783203 A1 20010213 (9)
PRAI US 2000-253443P 20001127 (60)
US 2000-253357P 20001127 (60)
DT Utility
FS APPLICATION
LN.CNT 3087
INCL INCLM: 435/366.000
INCLS: 424/093.210; 435/194.000
NCL NCLM: 435/325.000
NCLS: 536/023.100; 536/023.400; 536/024.100; 536/025.500
IC [7]
ICM: A61K048-00
ICS: C12N005-08; C12N009-12
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 239 OF 305 USPATFULL on STN
AN 2002:181787 USPATFULL
TI Limbic system-associated membrane protein
IN Levitt, Pat Ressler, Wyncote, PA, United States
Pimenta, Aurea, Princeton, NJ, United States
Fischer, Itzhak, Blue Bell, PA, United States
Zhukareva, Victoria, Philadelphia, PA, United States
PA University of Medicine and Dentistry of New Jersey, University Heights,
NJ, United States (U.S. corporation)
PI US 6423827 B1 20020723
AI US 1998-135080 19980817 (9)
RLI Division of Ser. No. US 1995-414657, filed on 15 May 1995, now patented,
Pat. No. US 5861283
DT Utility
FS GRANTED
LN.CNT 1689
INCL INCLM: 530/350.000
INCLS: 930/010.000
NCL NCLM: 530/350.000
NCLS: 930/010.000
IC [7]
ICM: C07K014-435
ICS: C07K014-705
EXF 530/350; 530/300; 930/10
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 240 OF 305 USPATFULL on STN
AN 2002:178783 USPATFULL
TI Hypoxia-mediated neurogenesis
IN Weiss, Samuel, Calgary, CANADA
Sorokan, S. Todd, Victoria, CANADA
PI US 2002094571 A1 20020718
AI US 2002-80161 A1 20020221 (10)
RLI Continuation of Ser. No. US 2000-742484, filed on 20 Dec 2000, GRANTED,
Pat. No. US 6368854 Continuation of Ser. No. US 1998-175890, filed on 20
Oct 1998, GRANTED, Pat. No. US 6165783
PRAI US 1997-63040P 19971024 (60)
DT Utility
FS APPLICATION
LN.CNT 370
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 241 OF 305 USPATFULL on STN
AN 2002:172375 USPATFULL
TI Use of 9-substituted purine analogues and other molecules to stimulate
neurogenesis
IN Taylor, Eve M., Del Mar, CA, UNITED STATES
PA Eve M. Taylor (U.S. corporation)
PI US 2002091133 A1 20020711
AI US 2001-22032 A1 20011212 (10)
PRAI US 2000-254910P 20001212 (60)
DT Utility
FS APPLICATION
LN.CNT 1834
INCL INCLM: 514/263.300
INCLS: 514/262.100; 514/263.350; 514/263.340; 514/418.000
NCL NCLM: 514/263.300
NCLS: 514/262.100; 514/263.350; 514/263.340; 514/418.000
IC [7]
ICM: A61K031-522
ICS: A61K031-519; A61K031-404

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 242 OF 305 USPATFULL on STN
AN 2002:171974 USPATFULL
TI Techniques for growth and differentiation of human pluripotent stem
cells
IN Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Inokuma, Margaret S., San Jose, CA, UNITED STATES
Xu, Chunhui, Cupertino, CA, UNITED STATES
PI US 2002090723 A1 20020711
AI US 2001-994440 A1 20011126 (9)
RLI Continuation of Ser. No. US 2001-859291, filed on 16 May 2001, PENDING
PRAI WO 2001-US1030 20010110
WO 2001-51616 20010719
US 2000-175581P 20000111 (60)
US 2000-213740P 20000622 (60)
US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
DT Utility
FS APPLICATION
LN.CNT 3920
INCL INCLM: 435/366.000
INCLS: 435/368.000
NCL NCLM: 435/366.000
NCLS: 435/368.000
IC [7]
ICM: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 243 OF 305 USPATFULL on STN
AN 2002:171973 USPATFULL
TI Pluripotent mammalian cells
IN Dominko, Tanja, Southbridge, MA, UNITED STATES
Page, Raymond L., Southbridge, MA, UNITED STATES
Colman, Alan, Midlothian, UNITED KINGDOM

PI Marshall, Vivienne, Christiansburg, VA, UNITED STATES
US 2002090722 A1 20020711
AI US 2001-881204 A1 20010615 (9)
PRAI US 2000-211593P 20000615 (60)
DT Utility
FS APPLICATION
LN.CNT 1564
INCL INCLM: 435/366.000
INCLS: 435/325.000
NCL NCLM: 435/366.000
NCLS: 435/325.000
IC [7]
ICM: C12N005-08

L6 ANSWER 244 OF 305 USPATFULL on STN
AN 2002:164392 USPATFULL
TI Tolerizing allografts of pluripotent stem cells
IN Chiu, Choy-Pik, Cupertino, CA, UNITED STATES
Kay, Robert M., San Francisco, CA, UNITED STATES
PI US 2002086005 A1 20020704
AI US 2001-990522 A1 20011121 (9)
PRAI US 2000-252688P 20001122 (60)
DT Utility
FS APPLICATION
LN.CNT 1045
INCL INCLM: 424/093.210
INCLS: 424/093.700; 435/366.000
NCL NCLM: 424/093.210
NCLS: 424/093.700; 435/366.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08

L6 ANSWER 245 OF 305 USPATFULL on STN
AN 2002:157125 USPATFULL
TI Techniques for growth and differentiation of human pluripotent stem cells
IN Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Funk, Walter D., Hayward, CA, UNITED STATES
Gold, Joseph D., San Francisco, CA, UNITED STATES
Inokuma, Margaret S., San Jose, CA, UNITED STATES
Xu, Chunhui, Cupertino, CA, UNITED STATES
PI US 2002081724 A1 20020627
AI US 2001-859291 A1 20010516 (9)
RLI Continuation of Ser. No. WO 2001-US1030, filed on 10 Jan 2001, UNKNOWN
PRAI US 2000-175581P 20000111 (60)
US 2000-213740P 20000622 (60)
US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
DT Utility
FS APPLICATION
LN.CNT 4037
INCL INCLM: 435/366.000
INCLS: 435/354.000; 435/384.000
NCL NCLM: 435/366.000
NCLS: 435/354.000; 435/384.000
IC [7]
ICM: C12N005-06
ICS: C12N005-08

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 246 OF 305 USPATFULL on STN
AN 2002:129781 USPATFULL
TI Multipotent ***neural*** ***stem*** ***cell*** cDNA
libraries
IN Weiss, Samuel, Calgary, CANADA
Reynolds, Brent, Saltspring, CANADA
PA Neurospheres Holdings Ltd., Calgary, CANADA (non-U.S. corporation)
PI US 6399369 B1 20020604
AI US 1995-484203 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994,
now abandoned Continuation of Ser. No. US 1991-726812, filed on 8 Jul
1991, now abandoned Continuation-in-part of Ser. No. US 1995-385404,
filed on 7 Feb 1995, now abandoned Continuation of Ser. No. US

Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned
Continuation-in-part of Ser. No. US 1994-359945, filed on 20 Dec 1994,
now abandoned Continuation of Ser. No. US 1994-221655, filed on 1 Apr
1994, now abandoned Continuation of Ser. No. US 1992-967622, filed on 28
Oct 1992, now abandoned Continuation-in-part of Ser. No. US 1991-726812,
filed on 8 Jul 1991 Continuation-in-part of Ser. No. US 1995-376062,
filed on 20 Jan 1995, now abandoned Continuation of Ser. No. US
1993-10829, filed on 29 Jan 1993 Continuation-in-part of Ser. No. US
1991-726812, filed on 8 Jul 1991, now abandoned Continuation-in-part of
Ser. No. US 1993-149508, filed on 9 Nov 1993, now abandoned
Continuation-in-part of Ser. No. US 726812 Continuation-in-part of Ser.
No. US 1994-311099, filed on 23 Sep 1994, now abandoned
Continuation-in-part of Ser. No. US 726812 Continuation-in-part of Ser.
No. US 1994-338730, filed on 14 Nov 1994, now abandoned
Continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991,
now abandoned

DT Utility
FS GRANTED
LN.CNT 3847
INCL INCLM: 435/320.100
INCLS: 536/023.500; 536/023.100; 435/368.000; 435/006.000; 435/091.100;
935/080.000
NCL NCLM: 435/320.100
NCLS: 435/006.000; 435/091.100; 435/368.000; 536/023.100; 536/023.500
IC [7]
ICM: C12N015-66
ICS: C12N015-12; C12Q001-68
EXF 536/23.1; 536/23.5; 435/320.1; 435/6; 435/91.1; 435/368; 935/80
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 247 OF 305 USPATFULL on STN
AN 2002:119347 USPATFULL
TI Device and method for treating ophthalmic diseases
IN Hammang, Joseph P., Barrington, RI, UNITED STATES
Baetge, E. Edward, St. Sulpice, SWITZERLAND
Tsiarias, William G., Barrington, RI, UNITED STATES
Spear, Peter D., Boulder, CO, UNITED STATES
PI US 2002061327 A1 20020523
US 6436427 B2 20020820
AI US 2001-973325 A1 20011009 (9)
RLI Continuation of Ser. No. US 1999-155066, filed on 27 Apr 1999, PATENTED
A 371 of International Ser. No. WO 1997-US4701, filed on 24 Mar 1997,
UNKNOWN Continuation of Ser. No. US 1996-620982, filed on 22 Mar 1996,
PATENTED

DT Utility
FS APPLICATION
LN.CNT 1102
INCL INCLM: 424/424.000
INCLS: 424/085.100; 424/094.100; 424/130.100
NCL NCLM: 424/427.000
NCLS: 623/004.100
IC [7]
ICM: A61K039-395
ICS: A61K038-43; A61K038-19
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 248 OF 305 USPATFULL on STN
AN 2002:92654 USPATFULL
TI Method of inducing neuronal production in the brain and spinal cord
IN Goldman, Steven A., South Salem, NY, UNITED STATES
Benraiss, Abdellatif, Astoria, NY, UNITED STATES
PI US 2002049178 A1 20020425
AI US 2001-846588 A1 20010501 (9)
PRAI US 2000-201230P 20000501 (60)
DT Utility
FS APPLICATION
LN.CNT 1997
INCL INCLM: 514/044.000
INCLS: 435/456.000; 424/093.200; 435/368.000
NCL NCLM: 514/044.000
NCLS: 435/456.000; 424/093.200; 435/368.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08; C12N015-867; C12N015-861
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 249 OF 305 USPATFULL on STN
AN 2002:85211 USPATFULL
TI COMMON NEURAL PROGENITOR FOR THE CNS AND PNS
IN RAO, MAHENDRA S., SALT LAKE CITY, UT, UNITED STATES
MUJTABA, TAHMINA, SANDY, UT, UNITED STATES
PI US 2002045251 A1 20020418
AI US 1998-73881 A1 19980506 (9)
RLI Continuation-in-part of Ser. No. US 1997-852744, filed on 7 May 1997,
PENDING
DT Utility
FS APPLICATION
LN.CNT 2636
INCL INCLM: 435/325.000
INCLS: 435/368.000; 435/373.000; 435/387.000; 435/384.000; 435/383.000;
435/391.000; 435/395.000; 435/402.000; 435/377.000
NCL NCLM: 435/325.000
NCLS: 435/368.000; 435/373.000; 435/387.000; 435/384.000; 435/383.000;
435/391.000; 435/395.000; 435/402.000; 435/377.000
IC [7]
ICM: C12N005-08
ICS: C12N005-06
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 250 OF 305 USPATFULL on STN
AN 2002:81274 USPATFULL
TI Methods of making conditioned cell culture medium compositions
IN Naughton, Gail K., La Jolla, CA, United States
Mansbridge, Jonathan N., La Jolla, CA, United States
Pinney, R. Emmett, Poway, CA, United States
PA Advanced Tissue Sciences, Inc., La Jolla, CA, United States (U.S.
corporation)
PI US 6372494 B1 20020416
AI US 1999-313538 19990514 (9)
DT Utility
FS GRANTED
LN.CNT 2008
INCL INCLM: 435/391.000
INCLS: 435/325.000; 435/304.000; 435/347.000; 435/366.000; 435/368.000;
435/370.000; 435/371.000; 435/372.000; 435/395.000; 424/198.100;
424/115.000; 514/002.000
NCL NCLM: 435/391.000
NCLS: 424/115.000; 424/198.100; 435/325.000; 435/347.000; 435/366.000;
435/368.000; 435/370.000; 435/371.000; 435/372.000; 435/384.000;
435/395.000; 514/002.000
IC [7]
ICM: C12N005-00
ICS: C12N005-08
EXF 435/70.3; 435/69.1; 435/69.4; 435/70.1; 435/325; 435/384; 435/347;
435/366; 435/368; 435/370; 435/371; 435/372; 435/373; 435/391; 435/395;
424/198.1; 424/115; 514/2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 251 OF 305 USPATFULL on STN
AN 2002:63530 USPATFULL
TI ARPE-19 as a platform cell line for encapsulated cell-based delivery
IN Tao, Weng, Lincoln, RI, United States
Rein, David H., Cambridge, MA, United States
Dean, Brenda J., Cumberland, RI, United States
Stabila, Paul F., Coventry, RI, United States
Goddard, Moses B.I., Tiverton, RI, United States
PA Neurotech S.A., Evry, FRANCE (non-U.S. corporation)
PI US 6361771 B1 20020326
AI US 2000-543119 20000405 (9)
PRAI US 1999-127926P 19990406 (60)
DT Utility
FS GRANTED
LN.CNT 1367
INCL INCLM: 424/093.210
INCLS: 435/320.100; 435/325.000; 435/455.000; 435/366.000; 435/371.000;
604/890.100; 604/043.000; 604/093.000
NCL NCLM: 424/093.210
NCLS: 435/320.100; 435/325.000; 435/366.000; 435/371.000; 435/455.000;
604/043.000; 604/890.100; 623/004.100
IC [7]
ICM: A61K048-00

EXF 424/93.21; 424/93.2; 424/93.1; 514/44; 435/325; 435/455; 435/320.1;
435/366; 435/371; 604/890.1; 604/44; 604/93; 604/27; 604/174; 604/175
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 252 OF 305 USPATFULL on STN
AN 2002:48319 USPATFULL
TI Human cord blood as a source of neural tissue for repair of the brain
and spinal cord
IN Sanberg, Paul, Spring Hill, FL, UNITED STATES
Sanchez-Remos, Juan, Tampa, FL, UNITED STATES
Willing, Alison, Tampa, FL, UNITED STATES
Richard, Daniel D., Sedona, AZ, UNITED STATES
PI US 2002028510 A1 20020307
AI US 2001-801221 A1 20010307 (9)
PRAI US 2000-188069P 20000309 (60)
US 2001-269238P 20010216 (60)
DT Utility
FS APPLICATION
LN.CNT 3155
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08

L6 ANSWER 253 OF 305 USPATFULL on STN
AN 2002:32225 USPATFULL
TI Direct differentiation of human pluripotent stem cells and
characterization of differentiated cells
IN Carpenter, Melissa K., Castro Valley, CA, UNITED STATES
Funk, Walter D., Hayward, CA, UNITED STATES
Thies, R. Scott, Pleasanton, CA, UNITED STATES
PI US 2002019046 A1 20020214
AI US 2001-888309 A1 20010621 (9)
PRAI US 2000-213739P 20000622 (60)
US 2000-216387P 20000707 (60)
US 2000-220064P 20000721 (60)
DT Utility
FS APPLICATION
LN.CNT 2164
INCL INCLM: 435/368.000
INCLS: 435/091.100; 435/004.000
NCL NCLM: 435/368.000
NCLS: 435/091.100; 435/004.000
IC [7]
ICM: C12Q001-00
ICS: C12N005-08; C12P019-34
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 254 OF 305 USPATFULL on STN
AN 2002:27155 USPATFULL
TI Multipotent ***neural*** ***stem*** ***cells*** from
peripheral tissues and uses thereof
IN Toma, Jean, Montreal, CANADA
Akhavan, Mahnaz, Montreal, CANADA
Fernandes, Karl J. L., Montreal, CANADA
Fortier, Mathieu, Orford, CANADA
Miller, Freda, Montreal, CANADA
PI US 2002016002 A1 20020207
AI US 2001-916639 A1 20010726 (9)
RLI Continuation-in-part of Ser. No. WO 2001-CA47, filed on 24 Jan 2001,
UNKNOWN Continuation-in-part of Ser. No. US 2000-670049, filed on 25 Sep
2000, UNKNOWN Continuation-in-part of Ser. No. US 2000-490422, filed on
24 Jan 2000, UNKNOWN
DT Utility
FS APPLICATION
LN.CNT 1697
INCL INCLM: 435/368.000
INCLS: 435/366.000
NCL NCLM: 435/368.000
NCLS: 435/366.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 255 OF 305 USPATFULL on STN

TI Negative-sense RNA virus vector for nerve cell
IN Fukumura, Masayuki, Tsukuba-shi, JAPAN
Asakawa, Makoto, Toyonaka-shi, JAPAN
Hasegawa, Mamoru, Tsukuba-shi, JAPAN
Shirakura, Masayuki, Tsukuba-shi, JAPAN
PA DNAVAC Research, Inc. (non-U.S. corporation)
PI US 2002012995 A1 20020131
AI US 2001-843922 A1 20010430 (9)
RLI Continuation-in-part of Ser. No. US 2001-720979, filed on 7 Mar 2001,
PENDING A 371 of International Ser. No. WO 1999-JP3552, filed on 1 Jul
1999, UNKNOWN
PRAI JP 1998-204333 19980703
DT Utility
FS APPLICATION
LN.CNT 1252
INCL INCLM: 435/456.000
INCLS: 435/235.100; 435/320.100; 424/093.210
NCL NCLM: 435/456.000
NCLS: 435/235.100; 435/320.100; 424/093.210
IC [7]
ICM: A61K048-00
ICS: C12N015-86; C12N007-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 256 OF 305 USPATFULL on STN
AN 2002:22068 USPATFULL
TI Method for isolating and purifying multipotential neural progenitor
cells and multipotential neural progenitor cells
IN Goldman, Steven A., South Salem, NY, UNITED STATES
Okano, Hideyuki, Osaka, JAPAN
PI US 2002012903 A1 20020131
AI US 2000-747810 A1 20001222 (9)
PRAI US 1999-173003P 19991223 (60)
DT Utility
FS APPLICATION
LN.CNT 2350
INCL INCLM: 435/004.000
INCLS: 435/368.000
NCL NCLM: 435/004.000
NCLS: 435/368.000
IC [7]
ICM: C12Q001-00
ICS: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 257 OF 305 USPATFULL on STN
AN 2002:8042 USPATFULL
TI Methods for treating neurological deficits
IN Reid, James Steven, Berkeley, CA, UNITED STATES
Fallon, James H., Irvine, CA, UNITED STATES
PA The Regents of the University of California, a California corporation
(U.S. corporation)
PI US 2002004039 A1 20020110
AI US 2001-920085 A1 20010731 (9)
RLI Continuation of Ser. No. US 1998-129028, filed on 4 Aug 1998, PENDING
PRAI US 1997-55383P 19970804 (60)
DT Utility
FS APPLICATION
LN.CNT 2578
INCL INCLM: 424/093.700
INCLS: 435/368.000
NCL NCLM: 424/093.700
NCLS: 435/368.000
IC [7]
ICM: A61K045-00
ICS: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 258 OF 305 USPATFULL on STN
AN 2002:3605 USPATFULL
TI Treatment of disorders by implanting stem cells and/or progeny thereof
into gastrointestinal organs
IN Pasricha, Pankaj J., Houston, TX, UNITED STATES
Micci, Maria A., Dickinson, TX, UNITED STATES
PI US 2002001578 A1 20020103

AI US 2001-834110 A1 20010412 (9)
PRAI US 2000-196806P 20000413 (60)
US 2000-232301P 20000912 (60)
DT Utility
FS APPLICATION
LN.CNT 580
INCL INCLM: 424/093.700
INCLS: 435/368.000
NCL NCLM: 424/093.100
NCLS: 424/093.200; 424/093.210
IC [7]
ICM: A61K045-00
ICS: C12N005-08

L6 ANSWER 259 OF 305 USPATFULL on STN
AN 2001:237692 USPATFULL
TI Use of collagenase in the preparation of ***neural*** ***stem***
cell cultures
IN Uchida, Nobuko, Palo Alto, CA, United States
PI US 2001055808 A1 20011227
AI US 2001-867330 A1 20010529 (9)
RLI Continuation of Ser. No. US 1999-258529, filed on 26 Feb 1999, UNKNOWN
DT Utility
FS APPLICATION
LN.CNT 718
INCL INCLM: 435/368.000
NCL NCLM: 435/368.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 260 OF 305 USPATFULL on STN
AN 2001:237475 USPATFULL
TI TRANSPLANTATION OF NEURAL CELLS FOR THE TREATMENT OF CHRONIC PAIN OR
SPASTICITY
IN DINSMORE, JONATHAN, BROOKLINE, MA, United States
SIEGAN, JULIE, BOSTON, MA, United States
PI US 2001055587 A1 20011227
US 6444205 B2 20020903
AI US 1998-163684 A1 19980930 (9)
DT Utility
FS APPLICATION
LN.CNT 1775
INCL INCLM: 424/093.700
INCLS: 424/423.000; 435/368.000
NCL NCLM: 424/093.700
IC [7]
ICM: A01N063-00
ICS: A01N065-00; C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 261 OF 305 USPATFULL on STN
AN 2001:218003 USPATFULL
TI Stem cells of the islets of langerhans and their use in treating
diabetes mellitus
IN Habener, Joel E., Newton Center, MA, United States
Zulewski, Henryk, Geneva, Switzerland
Abraham, Elizabeth J., Quincy, MA, United States
Thomas, Melissa K., Boston, MA, United States
Vallejo, Mario, Madrid, Spain
PI US 2001046489 A1 20011129
AI US 2000-731261 A1 20001206 (9)
PRAI US 1999-169082P 19991206 (60)
US 2000-215109P 20000628 (60)
US 2000-238880P 20001006 (60)
DT Utility
FS APPLICATION
LN.CNT 2114
INCL INCLM: 424/093.210
INCLS: 514/009.000; 424/152.100; 435/366.000
NCL NCLM: 424/093.210
NCLS: 514/009.000; 424/152.100; 435/366.000
IC [7]
ICM: A61K048-00
ICS: C12N005-08; A61K039-395

L6 ANSWER 262 OF 305 USPATFULL on STN
AN 2001:199945 USPATFULL
TI Erythropoietin-mediated neurogenesis
IN Weiss, Samuel, Calgary, Canada
Sorokan, S. Todd, Victoria, Canada
PI US 2001039049 A1 20011108
US 6368854 B2 20020409
AI US 2000-742484 A1 20001220 (9)
RLI Continuation of Ser. No. US 1998-175890, filed on 20 Oct 1998, GRANTED,
Pat. No. US 6165783
PRAI US 1997-63040P 19971024 (60)
DT Utility
FS APPLICATION
LN.CNT 380
INCL INCLM: 435/368.000
NCL NCLM: 435/325.000
NCLS: 424/085.100; 435/367.000; 435/375.000; 435/378.000; 514/002.000
IC [7]
ICM: C12N005-08
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 263 OF 305 USPATFULL on STN
AN 2001:196851 USPATFULL
TI Regulation of tyrosine hydroxylase expression
IN Sakurada, Kazuhiro, San Diego, CA, United States
Palmer, Theo, San Diego, CA, United States
Gage, Fred H., La Jolla, CA, United States
PA The Salk Institute for Biological Studies, La Jolla, CA, United States
(U.S. corporation)
PI US 6312949 B1 20011106
AI US 1999-277078 19990326 (9)
DT Utility
FS GRANTED
LN.CNT 1131
INCL INCLM: 435/325.000
INCLS: 435/006.000; 435/069.100; 435/455.000; 435/183.000; 435/189.000;
435/368.000; 536/023.100
NCL NCLM: 435/325.000
NCLS: 435/006.000; 435/069.100; 435/183.000; 435/189.000; 435/368.000;
435/455.000; 536/023.100
IC [7]
ICM: C12N015-63
ICS: C12N005-00; C12N009-02
EXF 435/455; 435/6; 435/183; 435/189; 435/69.1; 435/325; 435/368; 536/23.1
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 264 OF 305 USPATFULL on STN
AN 2001:188429 USPATFULL
TI Methods for isolation and activation of, and control of differentiation
from, stem and progenitor cells
IN Csete, Marie, South Pasadena, CA, United States
Doyle, John, South Pasadena, CA, United States
Wold, Barbara, San Marino, CA, United States
PA California Institute of Technology (U.S. corporation)
PI US 2001034061 A1 20011025
US 6589728 B2 20030708
AI US 2001-773824 A1 20010131 (9)
RLI Division of Ser. No. US 1998-195569, filed on 18 Nov 1998, GRANTED, Pat.
No. US 6184035
DT Utility
FS APPLICATION
LN.CNT 1176
INCL INCLM: 435/377.000
INCLS: 435/455.000; 435/004.000
NCL NCLM: 435/004.000
NCLS: 435/375.000; 435/377.000
IC [7]
ICM: C12Q001-00
ICS: C12N005-08; C12N015-63; C12N015-85
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 265 OF 305 USPATFULL on STN
AN 2001:173160 USPATFULL
TI Device and method for treating ophthalmic diseases

PA Baetge, E. Edward, St. Sulpice, Switzerland
PI Tsiaras, William G., Barrington, RI, United States
Spear, Peter D., Boulder, CO, United States
Neurotech S.A., Evry, France (non-U.S. corporation)
US 6299895 B1 20011009
WO 9734586 19970925
AI US 1999-155066 19990427 (9)
WO 1997-US4701 19970324
19990427 PCT 371 date
19990427 PCT 102(e) date

DT Utility
FS GRANTED
LN.CNT 1101
INCL INCLM: 424/427.000
INCLS: 435/182.000
NCL NCLM: 424/427.000
NCLS: 435/182.000
IC [7]
ICM: A61F002-14
ICS: C12N011-04
EXF 424/427; 435/177; 435/178; 435/182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 266 OF 305 USPATFULL on STN
AN 2001:165614 USPATFULL
TI Stem cells and their use in transplantation
IN Moss, Peter Ian, London, Great Britain
Walters, David Martin, London, Great Britain
Pointer, Graham, London, Great Britain
PI US 2001024824 A1 20010927
AI US 2000-731255 A1 20001206 (9)
PRAI US 1999-169082P 19991206 (60)
US 2000-215109P 20000628 (60)
US 2000-238880P 20001006 (60)

DT Utility
FS APPLICATION
LN.CNT 2446
INCL INCLM: 435/366.000
INCLS: 424/093.700
NCL NCLM: 435/366.000
NCLS: 424/093.700
IC [7]
ICM: C12N005-08
ICS: A61K045-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 267 OF 305 USPATFULL on STN
AN 2001:147750 USPATFULL
TI Method for generating dopaminergic cells derived from neural precursors
IN Bowen, David C., Washington, DC, United States
John, Karl K., Potomac, MD, United States
PA NeuralStem Biopharmaceuticals, Ltd., College Park, MD, United States
(U.S. corporation)
PI US 6284539 B1 20010904
AI US 1998-169309 19981009 (9)
DT Utility
FS GRANTED
LN.CNT 1635
INCL INCLM: 435/455.000
INCLS: 435/320.100; 435/325.000; 435/368.000; 424/093.210; 514/044.000;
536/023.100; 536/023.500
NCL NCLM: 435/455.000
NCLS: 424/093.210; 435/320.100; 435/325.000; 435/368.000; 514/044.000;
536/023.100; 536/023.500
IC [7]
ICM: C12N015-63
ICS: C12N015-85; C12N015-87; C12N015-00; C12N015-09
EXF 435/467; 435/368; 435/320.1; 435/325; 435/455; 514/44; 424/93.21;
536/23.1; 536/23.5
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 268 OF 305 USPATFULL on STN
AN 2001:116550 USPATFULL
TI Compositions for the delivery of biologically active molecules using
genetically altered cells contained in biocompatible immunoisolatory

IN Baetge, Edward E., Barrington, RI, United States
Hammang, Joseph P., Barrington, RI, United States
Gentile, Frank T., Warwick, RI, United States
Lindner, Mark D., Bristol, RI, United States
Winn, Shelley R., Smithfield, RI, United States
Emerich, Dwaine F., Providence, RI, United States
PA Neurotech S.A., Evry, France (non-U.S. corporation)
PI US 6264941 B1 20010724
AI US 1999-236246 19990125 (9)
RLI Continuation of Ser. No. US 1995-450862, filed on 25 May 1995, now patented, Pat. No. US 5908633, issued on 1 Jun 1999 Continuation-in-part of Ser. No. WO 1994-US9299, filed on 12 Aug 1994 Continuation-in-part of Ser. No. US 1993-105278, filed on 12 Aug 1993, now abandoned
DT Utility
FS GRANTED
LN.CNT 2516
INCL INCLM: 424/093.210
INCLS: 424/451.000; 424/457.000; 424/462.000; 424/490.000; 424/497.000;
424/427.000
NCL NCLM: 424/093.210
NCLS: 424/427.000; 424/451.000; 424/457.000; 424/462.000; 424/490.000;
424/497.000
IC [7]
ICM: A61K048-00
ICS: A61K009-52
EXF 435/402; 435/320.1; 435/325; 424/473; 424/93.21; 424/451; 424/457;
424/460; 424/462; 424/422; 424/425; 424/226; 424/427
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 269 OF 305 USPATFULL on STN
AN 2001:109775 USPATFULL
TI Compositions and methods for manipulating glial progenitor cells and treating neurological deficits
IN Reid, James Steven, Berkeley, CA, United States
Fallon, James H., Irvine, CA, United States
PI US 2001007657 A1 20010712
AI US 2000-739933 A1 20001218 (9)
RLI Continuation-in-part of Ser. No. US 1998-129028, filed on 4 Aug 1998, PENDING
PRAI US 1997-55383P 19970804 (60)
DT Utility
FS APPLICATION
LN.CNT 3303
INCL INCLM: 424/093.700
NCL NCLM: 424/093.700
IC [7]
ICM: A01N063-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 270 OF 305 USPATFULL on STN
AN 2001:78948 USPATFULL
TI Use of collagenase in the preparation of ***neural*** ***stem*** ***cell*** cultures
IN Uchida, Nobuko, Palo Alto, CA, United States
PA StemCells, Inc., Sunnyvale, CA, United States (U.S. corporation)
PI US 6238922 B1 20010529
AI US 1999-258529 19990226 (9)
DT Utility
FS Granted
LN.CNT 701
INCL INCLM: 435/380.000
INCLS: 435/381.000; 435/378.000; 435/368.000
NCL NCLM: 435/380.000
NCLS: 435/368.000; 435/378.000; 435/381.000
IC [7]
ICM: C12N005-02
EXF 435/368; 435/378; 435/380; 435/381
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 271 OF 305 USPATFULL on STN
AN 2001:18282 USPATFULL
TI Methods for isolation and activation of, and control of differentiation from, skeletal muscle stem or progenitor cells
IN Csete, Marie, South Pasadena, CA, United States
Doyle, John, South Pasadena, CA, United States

PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 6184035 B1 20010206
AI US 1998-195569 19981118 (9)
DT Utility
FS Granted
LN.CNT 1223
INCL INCLM: 435/377.000
INCLS: 435/375.000
NCL NCLM: 435/377.000
NCLS: 435/375.000
IC [7]
ICM: C12N005-00
EXF 435/375; 435/377
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 272 OF 305 USPATFULL on STN
AN 2001:4285 USPATFULL
TI Guided development and support of hydrogel-cell compositions
IN Vacanti, Charles A., Uxbridge, MA, United States
Vacanti, Joseph P., Winchester, MA, United States
Vacanti, Martin P., Westborough, MA, United States
PA University of Massachusetts, Boston, MA, United States (U.S. corporation)
The Children's Medical Center Corporation, Boston, MA, United States (U.S. corporation)
PI US 6171610 B1 20010109
AI US 1998-200033 19981125 (9)
RLI Continuation-in-part of Ser. No. US 1998-66038, filed on 24 Apr 1998
DT Patent
FS Granted
LN.CNT 1742
INCL INCLM: 424/426.000
INCLS: 623/012.000; 623/016.000
NCL NCLM: 424/426.000
IC [7]
ICM: A61F002-02
EXF 424/426; 623/12; 623/16
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 273 OF 305 USPATFULL on STN
AN 2000:174411 USPATFULL
TI Erythropoietin-mediated neurogenesis
IN Weiss, Samuel, Calgary, Canada
Sorokan, S. Todd, Victoria, Canada
PA Neuro Spheres Holdings Ltd., Calgary, Canada (non-U.S. corporation)
PI US 6165783 20001226
AI US 1998-175890 19981020 (9)
PRAI US 1997-63040P 19971024 (60)
DT Utility
FS Granted
LN.CNT 457
INCL INCLM: 435/325.000
INCLS: 435/367.000; 435/378.000; 435/375.000; 514/002.000; 424/085.100
NCL NCLM: 435/325.000
NCLS: 424/085.100; 435/367.000; 435/375.000; 435/378.000; 514/002.000
IC [7]
ICM: C12N005-00
EXF 435/325; 435/368; 435/377; 435/375; 514/2; 424/85.1
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 274 OF 305 USPATFULL on STN
AN 2000:164330 USPATFULL
TI Bioartificial extracellular matrix containing hydrogel matrix derivatized with cell adhesive peptide fragment
IN Bellamkonda, Ravi, Boston, MA, United States
Ranieri, John P., Lausanne, Switzerland
Aebischer, Patrick, Lutry, Switzerland
PA Neurotech S.A., Evry, France (non-U.S. corporation)
PI US 6156572 20001205
AI US 1998-160654 19980925 (9)
RLI Division of Ser. No. US 1994-280646, filed on 20 Jul 1994, now patented, Pat. No. US 5834029
DT Utility
FS Granted

INCL INCLM: 435/395.000
INCLS: 424/093.700; 424/423.000; 424/488.000; 435/177.000; 435/178.000;
435/325.000; 435/368.000; 435/397.000; 530/326.000; 530/328.000;
530/329.000; 530/402.000; 530/812.000; 530/813.000; 606/152.000
NCL NCLM: 435/395.000
NCLS: 424/093.700; 424/423.000; 424/488.000; 435/177.000; 435/178.000;
435/325.000; 435/368.000; 435/397.000; 530/326.000; 530/328.000;
530/329.000; 530/402.000; 530/812.000; 530/813.000; 606/152.000

IC [7]
ICM: C12N005-00
ICS: C12N011-10; A61K038-00; C07K017-02; C07K017-10
EXF 435/177; 435/178; 435/325; 435/368; 435/395; 435/397; 435/402; 424/570;
424/423; 424/93.7; 424/488; 530/326; 530/328; 530/329; 530/812; 530/402;
530/813; 606/152
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 275 OF 305 USPATFULL on STN
AN 2000:105715 USPATFULL
TI Cultures of human CNS ***neural*** ***stem*** ***cells***
IN Carpenter, Melissa, Lincoln, RI, United States
PA Cytotherapeutics, Inc., Lincoln, RI, United States (U.S. corporation)
PI US 6103530 20000815
AI US 1998-178035 19981023 (9)
RLI Division of Ser. No. US 1997-926313, filed on 5 Sep 1997
DT Utility
FS Granted
LN.CNT 835
INCL INCLM: 435/405.000
INCLS: 435/325.000; 435/368.000; 435/377.000; 435/384.000; 435/387.000;
435/389.000; 435/404.000; 435/406.000
NCL NCLM: 435/405.000
NCLS: 435/325.000; 435/368.000; 435/377.000; 435/384.000; 435/387.000;
435/389.000; 435/404.000; 435/406.000
IC [7]
ICM: C12N005-00
EXF 435/325; 435/368; 435/377; 435/384; 435/387; 435/389; 435/404; 435/405;
435/406
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 276 OF 305 USPATFULL on STN
AN 2000:94830 USPATFULL
TI Generation of hematopoietic cells from multipotent ***neural***
stem ***cells***
IN Bjornson, Christopher R., Seattle, WA, United States
Rietze, Rod L., Brunswick, Australia
Reynolds, Brent A., Saltspring, Canada
Vescovi, Angelo L., Milan, Italy
PA NeuroSpheres Holdings Ltd., Calgary, Canada (non-U.S. corporation)
PI US 6093531 20000725
AI US 1998-100679 19980619 (9)
PRAI US 1997-60289P 19970929 (60)
DT Utility
FS Granted
LN.CNT 1102
INCL INCLM: 435/001.100
INCLS: 435/325.000; 424/093.210
NCL NCLM: 435/001.100
NCLS: 424/093.210; 435/325.000
IC [7]
ICM: C12N005-06
EXF 435/1.1; 435/325; 429/93.1; 429/93.21
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 277 OF 305 USPATFULL on STN
AN 2000:70818 USPATFULL
TI In vivo genetic modification of growth factor-responsive neural
precursor cells
IN Weiss, Samuel, Alberta, Canada
Reynolds, Brent, Alberta, Canada
Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, Barrington, RI, United States
PA NeuroSpheres Holdings Ltd., Calgary, Canada (non-U.S. corporation)
PI US 6071889 20000606
AI US 1995-479795 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994,

filled on 7 Feb 1995, now abandoned And a continuation-in-part of Ser. No. US 1994-359945, filed on 20 Dec 1994, now abandoned And a continuation-in-part of Ser. No. US 1995-376062, filed on 20 Jan 1995, now abandoned And a continuation-in-part of Ser. No. US 1993-149508, filed on 9 Nov 1993, now abandoned And a continuation-in-part of Ser. No. US 1994-311099, filed on 23 Sep 1994, now abandoned And a continuation-in-part of Ser. No. US 1994-338730, filed on 14 Nov 1994, now abandoned which is a continuation of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 1994-270412, filed on 5 Jul 1994, now abandoned which is a continuation of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 1995-385404, filed on 7 Feb 1995, now abandoned which is a continuation of Ser. No. US 1992-961813, filed on 16 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 1994-359945, filed on 20 Dec 1994, now abandoned which is a continuation of Ser. No. US 1994-221655, filed on 1 Apr 1994, now abandoned which is a continuation of Ser. No. US 1992-967622, filed on 28 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 1995-376062, filed on 20 Jan 1995, now abandoned which is a continuation of Ser. No. US 1993-10829, filed on 29 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 1993-149508, filed on 9 Nov 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 1994-311099, filed on 23 Sep 1994, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned

DT Utility
FS Granted
LN.CNT 4261
INCL INCLM: 514/044.000
INCLS: 424/093.100; 424/093.200; 424/093.210; 435/440.000; 435/455.000
NCL NCLM: 514/044.000
NCLS: 424/093.100; 424/093.200; 424/093.210; 435/440.000; 435/455.000
IC [7]
ICM: A61K035-00
ICS: A61K048-00
EXF 514/44; 514/2; 536/23.1; 424/93.1; 424/93.2; 424/93.21; 435/455; 435/440
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 278 OF 305 USPATFULL on STN
AN 2000:27802 USPATFULL
TI Methods for differentiating ***neural*** ***stem***
 cells to glial cells using neuregulins
IN Anderson, David J., Altadena, CA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S.
corporation)
PI US 6033906 20000307
AI US 1995-372329 19950506 (8)
RLI Continuation-in-part of Ser. No. US 1994-188285, filed on 28 Jan 1994,
now abandoned which is a continuation-in-part of Ser. No. WO
1993-US7000, filed on 26 Jul 1993
DT Utility
FS Granted
LN.CNT 2116
INCL INCLM: 435/325.000
INCLS: 435/353.000; 435/368.000
NCL NCLM: 435/325.000
NCLS: 435/353.000; 435/368.000
IC [7]
ICM: C12N005-00
EXF 435/240.2; 435/325; 435/368; 435/353
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 279 OF 305 USPATFULL on STN
AN 1999:163509 USPATFULL
TI Methods for differentiating ***neural*** ***stem***
 cells to ***neurons*** or smooth muscle cells using
TGT-.beta. super family growth factors
IN Anderson, David J., Altadena, CA, United States
PA Shah, Nirao M., New York, NY, United States
California Institute of Technology, Pasadena, CA, United States (U.S.
corporation)
PI US 6001654 19991214

R11 Continuation-in-part of Ser. No. US 1994-188286, filed on 28 Jan 1994, now patented, Pat. No. US 5654183 which is a continuation-in-part of Ser. No. WO 1993-US7000, filed on 26 Jul 1993 which is a continuation-in-part of Ser. No. US 1992-969088, filed on 29 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1992-920617, filed on 27 Jul 1992, now abandoned
PRAI US 1997-44797P 19970424 (60)
DT Utility
FS Granted
LN.CNT 2392
INCL INCLM: 435/377.000
INCLS: 435/325.000; 435/352.000; 435/353.000; 435/368.000; 435/375.000
NCL NCLM: 435/377.000
NCLS: 435/325.000; 435/352.000; 435/353.000; 435/368.000; 435/375.000
IC [6]
ICM: C12N005-16
EXF 435/325; 435/375; 435/352; 435/353; 435/377; 435/368
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 280 OF 305 USPATFULL on STN
AN 1999:141292 USPATFULL
TI Growth factor-induced proliferation of neural precursor cells in vivo
IN Weiss, Samuel, Alberta, Canada.
PA Reynolds, Brent, Alberta, Canada
PA NeuroSpheres Holdings Ltd., Calgary, Canada (non-U.S. corporation)
PI US 5980885 19991109
AI US 1995-486307 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994, now abandoned Ser. No. Ser. No. US 1995-385404, filed on 7 Feb 1995, now abandoned Ser. No. Ser. No. US 1994-359945, filed on 20 Dec 1994, now abandoned Ser. No. Ser. No. US 1995-376062, filed on 20 Jan 1995, now abandoned Ser. No. Ser. No. US 1993-149508, filed on 9 Nov 1993, now abandoned Ser. No. Ser. No. US 1994-311099, filed on 23 Sep 1994, now abandoned And Ser. No. US 1994-338730, filed on 14 Nov 1994, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US 270412 which is a continuation of Ser. No. US 726812 , said Ser. No. US 385404 which is a continuation of Ser. No. US 1992-961813, filed on 16 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 726812 , said Ser. No. US 359945 which is a continuation of Ser. No. US 1994-221655, filed on 1 Apr 1994, now abandoned which is a continuation of Ser. No. US 1992-967622, filed on 28 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 726812 , said Ser. No. US 376062 which is a continuation of Ser. No. US 1993-10829, filed on 29 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 726812 , said Ser. No. US 149508 which is a continuation-in-part of Ser. No. US 726812 , said Ser. No. US 311099 which is a continuation-in-part of Ser. No. US 726812
DT Utility
FS Granted
LN.CNT 4215
INCL INCLM: 424/093.210
INCLS: 424/093.100; 424/093.200; 435/325.000; 435/360.000; 435/366.000;
435/368.000; 435/377.000; 435/383.000; 435/384.000; 435/440.000;
435/455.000; 435/456.000; 435/457.000; 514/002.000; 514/044.000
NCL NCLM: 424/093.210
NCLS: 424/093.100; 424/093.200; 435/325.000; 435/360.000; 435/366.000;
435/368.000; 435/377.000; 435/383.000; 435/384.000; 435/440.000;
435/455.000; 435/456.000; 435/457.000; 514/002.000; 514/044.000
IC [6]
ICM: A01N063-00
ICS: A01N043-04; C12N005-00; C12N005-08
EXF 435/240.2; 435/325; 435/360; 435/366; 435/368; 435/377; 435/383;
435/455; 435/456; 435/457; 514/2; 514/44; 424/93.1; 424/93.2; 424/93.21
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 281 OF 305 USPATFULL on STN
AN 1999:128445 USPATFULL
TI Human CNS ***neural*** ***stem*** ***cells***
IN Carpenter, Melissa, Lincoln, RI, United States
PA Cytotherapeutics, Inc., Providence, RI, United States (U.S. corporation)
PI US 5968829 19991019
AI US 1997-926313 19970905 (8)
DT Utility
FS Granted

INCL INCLM: 435/467.000
INCLS: 435/368.000; 435/377.000; 424/093.700
NCL NCLM: 435/467.000
NCLS: 424/093.700; 435/368.000; 435/377.000
IC [6]
ICM: C12N005-08
ICS: C12N005-10
EXF 435/368; 435/377; 435/467; 424/93.7
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 282 OF 305 USPATFULL on STN
AN 1999:117338 USPATFULL
TI Engraftable human ***neural*** ***stem*** ***cells***
IN Snyder, Evan Y., Jamaica Plain, MA, United States
Wolfe, John H., Philadelphia, PA, United States
Kim, Seung U., Vancouver, Canada
PA The Children's Medical Center Corp., Boston, MA, United States (U.S. corporation)
PI US 5958767 19990928
AI US 1998-133873 19980814 (9)
DT Utility
FS Granted
LN.CNT 1267
INCL INCLM: 435/368.000
INCLS: 435/455.000
NCL NCLM: 435/368.000
NCLS: 435/455.000
IC [6]
ICM: C12N005-08
EXF 935/325; 935/366; 935/368; 935/455
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 283 OF 305 USPATFULL on STN
AN 1999:85298 USPATFULL
TI Mammalian multipotent ***neural*** ***stem*** ***cells***
IN Anderson, David J., Altadena, CA, United States
Stemple, Derek L., Newton, MA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 5928947 19990727
AI US 1995-483142 19950607 (8)
RLI Division of Ser. No. US 1994-188286, filed on 28 Jan 1994, now patented, Pat. No. US 5654183 And a continuation-in-part of Ser. No. WO 1993-US7000, filed on 26 Jul 1993 which is a continuation-in-part of Ser. No. US 1992-969088, filed on 29 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1992-920617, filed on 27 Jul 1992, now abandoned
DT Utility
FS Granted
LN.CNT 2114
INCL INCLM: 435/455.000
INCLS: 435/069.100; 435/325.000; 435/440.000; 424/093.700
NCL NCLM: 435/455.000
NCLS: 424/093.700; 435/069.100; 435/325.000; 435/440.000
IC [6]
ICM: C12N015-00
ICS: C12N015-85; A16K035-30
EXF 435/69.1; 435/320.1; 435/240.2; 435/325; 400/2; 424/93.7

L6 ANSWER 284 OF 305 USPATFULL on STN
AN 1999:63096 USPATFULL
TI Compositions and methods for the delivery of biologically active molecules using genetically altered cells contained in biocompatible immunoisolatory capsules
IN Baetge, Edward E., Barrington, RI, United States
Hammang, Joseph P., Barrington, RI, United States
Gentile, Frank T., Warwick, RI, United States
Lindner, Mark D., Bristol, RI, United States
Winn, Shelley R., Smithfield, RI, United States
Emerich, Dwaine F., Providence, RI, United States
PA CytoTherapeutics, Inc., Lincoln, RI, United States (U.S. corporation)
PI US 5908623 19990601
AI US 1995-450862 19950525 (8)
RLI Continuation-in-part of Ser. No. WO 1994-US9299, filed on 12 Aug 1994 which is a continuation-in-part of Ser. No. US 1993-105278, filed on 12

DT UTILITY
FS Granted
LN.CNT 2408
INCL INCLM: 424/093.210
INCLS: 424/093.200
NCL NCLM: 424/093.210
NCLS: 424/093.200
IC [6]
ICM: A01N063-00
EXF 424/93.21; 424/408; 424/422; 424/424; 424/93.1; 424/93.2; 435/284.1;
435/285.1; 514/44
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 285 OF 305 USPATFULL on STN
AN 1999:58135 USPATFULL
TI Method for treating ophthalmic diseases
IN Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, Barrington, RI, United States
Spear, Peter D., Madison, WI, United States
Tsiaras, William G., Barrington, RI, United States
PA CytoTherapeutics, Inc., Lincoln, RI, United States (U.S. corporation)
PI US 5904144 19990518
AI US 1996-620982 19960322 (8)
DT Utility
FS Granted
LN.CNT 842
INCL INCLM: 128/898.000
INCLS: 623/004.000; 604/890.100
NCL NCLM: 128/898.000
NCLS: 604/890.100; 623/006.570
IC [6]
ICM: A61B019-00
EXF 604/49; 604/290; 604/289; 604/890.1; 604/891.1; 128/897; 128/898;
424/424; 424/427; 623/4
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 286 OF 305 USPATFULL on STN
AN 1999:24325 USPATFULL
TI Methods for making immunoisolatory implantable vehicles with a
biocompatible jacket and a biocompatible matrix core
IN Dionne, Keith E., Rehoboth, MA, United States
Emerich, Dwaine F., Providence, RI, United States
Hoffman, Diane, Cambridge, MA, United States
Sanberg, Paul R., Spring Hill, FL, United States
Christenson, Lisa, New Haven, CT, United States
Hegre, Orion D., Green Valley, AZ, United States
Scharp, David W., St. Louis, MO, United States
Lacy, Paul E., Webster Grove, MO, United States
Aebischer, Patrick, Lutry, Switzerland
Vasooohcellos, Alfred V., Cranston, RI, United States
Lysaght, Michael J., E. Greenwich, RI, United States
Gentile, Frank T., Warwich, RI, United States
PA Brown University Research Foundation, United States (U.S. corporation)
PI US 5874099 19990223
AI US 1995-449837 19950524 (8)
RLI Division of Ser. No. US 1994-179151, filed on 10 Jan 1994 which is a
continuation-in-part of Ser. No. US 1991-692403, filed on 25 Apr 1991,
now abandoned
DT Utility
FS Granted
LN.CNT 3879
INCL INCLM: 424/422.000
INCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
424/434.000; 424/437.000; 424/489.000; 424/490.000
NCL NCLM: 424/422.000
NCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
424/434.000; 424/437.000; 424/489.000; 424/490.000
IC [6]
ICM: A61K009-50
ICS: A61K009-14
EXF 424/422; 424/423; 424/424; 424/426; 424/427; 424/430; 424/434; 424/437;
424/489; 424/490
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 287 OF 305 USPATFULL on STN

TI Methods for treatment or prevention of neurodegenerative conditions using immunoisolatory implantable vehicles with a biocompatible jacket and a biocompatible matrix core
IN Dionne, Keith E., Rehoboth, MA, United States
Emerich, Dwaine F., Providence, RI, United States
Hoffman, Diane, Cambridge, MA, United States
Sanberg, Paul R., Spring Hill, FL, United States
Christenson, Lisa, New Haven, CT, United States
Hegre, Orion D., Green Valley, AZ, United States
Scharp, David W., St. Louis, MO, United States
Lacy, Paul E., Webster Grove, MO, United States
Aebischer, Patrick, Lutry, Switzerland
Vasconcellos, Alfred V., Cranston, RI, United States
Lysaght, Michael J., Greenwich, RI, United States
Gentile, Frank T., Warwick, RI, United States
PA Brown University Research Foundation, United States (U.S. corporation)
PI US 5871767 19990216
AI US 1995-449062 19950524 (8)
RLI Division of Ser. No. US 1994-179151, filed on 10 Jan 1994 which is a continuation-in-part of Ser. No. US 1991-692403, filed on 25 Apr 1991, now abandoned
DT Utility
FS Granted
LN.CNT 3909
INCL INCLM: 429/422.000
INCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
424/434.000; 424/437.000; 424/489.000; 424/490.000
NCL NCLM: 424/422.000
NCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
424/434.000; 424/437.000; 424/489.000; 424/490.000
IC [6]
ICM: A61K009-50
ICS: A61K009-14
EXF 424/422; 424/423; 424/426; 424/427; 424/430; 424/434; 424/437; 424/489;
424/490
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 288 OF 305 USPATFULL on STN
AN 1999:7270 USPATFULL
TI DNA encoding a limbic system-associated membrane protein
IN Levitt, Pat Ressler, Wyncote, PA, United States
Pimenta, Aurea, Princeton, NJ, United States
Fischer, Itzhak, Blue Bell, PA, United States
Zhukareva, Victoria, Philadelphia, PA, United States
PA The University of Medicine and Dentistry of New Jersey, Newark, NJ,
United States (U.S. corporation)
PI US 5861283 19990119
AI US 1995-414657 19950331 (8)
DT Utility
FS Granted
LN.CNT 2195
INCL INCLM: 435/069.400
INCLS: 536/023.100; 536/023.510; 536/024.100; 435/320.100; 435/252.300;
435/325.000
NCL NCLM: 435/069.400
NCLS: 435/252.300; 435/320.100; 435/325.000; 536/023.100; 536/023.510;
536/024.100
IC [6]
ICM: C12N015-18
ICS: C12N015-63; C12N015-85; C07H021-04
EXF 536/23.4; 536/24.1; 536/23.1; 536/23.51; 935/18; 935/70; 935/72;
435/240.1; 435/252.3; 435/320.1; 435/69.4; 435/325
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 289 OF 305 USPATFULL on STN
AN 1998:159764 USPATFULL
TI In vitro growth and proliferation of multipotent ***neural***
stem ***cells*** and their progeny
IN Weiss, Samuel, Alberta, Canada
Reynolds, Brent, Alberta, Canada
Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, Barrington, RI, United States
PA Neurospheres, Ltd., Canada (non-U.S. corporation)
PI US 5851832 19981222
AI US 1995-486648 19950607 (8)

now abandoned which is a continuation of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned And a continuation-in-part of Ser. No. US 1995-385404, filed on 7 Feb 1995, now abandoned which is a continuation of Ser. No. US 1992-961813, filed on 16 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 726812 And Ser. No. US 1994-359945, filed on 20 Dec 1994, now abandoned which is a continuation of Ser. No. US 1994-221655, filed on 1 Apr 1994, now abandoned which is a continuation of Ser. No. US 1992-967622, filed on 28 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned And Ser. No. US 1995-376062, filed on 20 Jan 1995, now abandoned which is a continuation of Ser. No. US 1993-10829, filed on 29 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 726812 And Ser. No. US 1993-149508, filed on 9 Nov 1993, now abandoned which is a continuation-in-part of Ser. No. US 726812 And Ser. No. US 1994-311099, filed on 23 Sep 1994, now abandoned which is a continuation-in-part of Ser. No. US 726812 And Ser. No. US 1994-338730, filed on 14 Nov 1994, now abandoned which is a continuation-in-part of Ser. No. US 726812

DT Utility
FS Granted
LN.CNT 4487
INCL INCLM: 435/368.000
INCLS: 435/325.000; 435/366.000; 435/383.000; 435/384.000.
NCL NCLM: 435/368.000
NCLS: 435/325.000; 435/366.000; 435/377.000; 435/383.000; 435/384.000
IC [6]
ICM: C12N005-06
ICS: C12N005-08; C12N005-02
EXF 435/240.2; 435/325; 435/366; 435/368; 435/377; 435/383; 435/384
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 290 OF 305 USPATFULL on STN
AN 1998:157163 USPATFULL
TI Mammalian multipotent ***neural*** ***stem*** ***cells***
IN Anderson, David J., Altadena, CA, United States
Stemple, Derek L., Newton, MA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)
PI US 5849553 19981215
AI US 1995-485612 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1994-188286, filed on 28 Jan 1994, now patented, Pat. No. US 5654183 which is a continuation-in-part of Ser. No. US 1992-969088, filed on 29 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1992-920617, filed on 27 Jul 1992, now abandoned
DT Utility
FS Granted
LN.CNT 3072
INCL INCLM: 435/172.300
INCLS: 435/069.100; 435/320.100; 435/325.000; 435/353.000
NCL NCLM: 435/467.000
NCLS: 435/069.100; 435/320.100; 435/325.000; 435/353.000; 435/368.000; 435/455.000; 435/462.000
IC [6]
ICM: C12N015-85
ICS: C12N015-09
EXF 435/69.1; 435/172.3; 435/320.1; 435/325; 435/353
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 291 OF 305 USPATFULL on STN
AN 1998:138481 USPATFULL
TI Nerve guidance channel containing bioartificial three-dimensional hydrogel extracellular matrix derivatized with cell adhesive peptide fragment
IN Bellamkonda, Ravi, Boston, MA, United States
Ranieri, John P., Lausanne, Switzerland
Aebischer, Patrick, Lutry, Switzerland
PA CytoTherapeutics, Inc., Lincoln, RI, United States (U.S. corporation)
PI US 5834029 19981110
AI US 1994-280646 19940720 (8)
DT Utility
FS Granted
LN.CNT 1609
INCL INCLM: 424/570.000
INCLS: 424/093.700; 435/177.000; 435/178.000; 435/368.000; 435/395.000;

NCL 530/402.000; 606/152.000
NCLM: 424/570.000
NCLS: 424/093.700; 435/177.000; 435/178.000; 435/368.000; 435/395.000;
435/397.000; 435/402.000; 530/326.000; 530/328.000; 530/329.000;
530/402.000; 606/152.000

IC [6]
EXF ICM: A61K035-30
ICS: C12N011-10; C12N005-00; A61B017-08
435/174; 435/177; 435/178; 435/240.243; 435/368; 435/395; 435/397;
435/402; 606/152; 530/326; 530/327; 530/328; 530/329; 530/330; 530/402;
424/570

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 292 OF 305 USPATFULL on STN

AN 1998:138453 USPATFULL

TI Methods for making immunoisolatory implantable vehicles with a
biocompatible jacket and a biocompatible matrix core

IN Dionne, Keith E., Rehoboth, MA, United States

Emerich, Dwaine F., Providence, RI, United States

Hoffman, Diane, Cambridge, MA, United States

Sanberg, Paul R., Spring Hill, FL, United States

Christenson, Lisa, New Haven, CT, United States

Hegre, Orion D., Green Valley, AZ, United States

Sharp, David W., St. Louis, MO, United States

Lacy, Paul E., Webster Grove, MO, United States

Aebischer, Patrick, Lutry, Switzerland

Vasconcellos, Alfred V., Cranston, RI, United States

Lysaght, Michael J., Greenwich, RI, United States

Gentile, Frank T., Warwick, RI, United States

PA Brown University Research Foundation, United States (U.S. corporation)

PI US 5834001 19981110

AI US 1995-449214 19950524 (8)

RLI Division of Ser. No. US 1994-179151, filed on 10 Jan 1994 which is a
continuation-in-part of Ser. No. US 1991-692403, filed on 25 Apr 1991,
now abandoned

DT Utility

FS Granted

LN.CNT 3844

INCL INCLM: 424/422.000

INCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
424/434.000; 424/437.000; 424/489.000; 424/490.000

NCL NCLM: 424/422.000

NCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
424/434.000; 424/437.000; 424/489.000; 424/490.000.

IC [6]

EXF ICM: A61K009-50

ICS: A61K009-14

424/422; 424/423; 424/424; 424/426; 424/427; 424/430; 424/434; 424/437;
424/489; 424/490

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 293 OF 305 USPATFULL on STN

AN 1998:128083 USPATFULL

TI In vitro method for obtaining an isolated population of mammalian neural
crest stem cells

IN Anderson, David J., Altadena, CA, United States

Stemple, Derek L., Pasadena, CA, United States

PA California Institute of Technology, Pasadena, CA, United States (U.S.
corporation)

PI US 5824489 19981020

AI US 1994-290229 19940815 (8)

RLI Continuation of Ser. No. US 1992-969088, filed on 29 Oct 1992, now
abandoned which is a continuation-in-part of Ser. No. US 1992-920617,
filed on 27 Jul 1992, now abandoned

DT Utility

FS Granted

LN.CNT 1689

INCL INCLM: 435/007.210

INCLS: 435/325.000; 435/375.000; 435/377.000; 435/378.000; 435/395.000;
435/402.000

NCL NCLM: 435/007.210

NCLS: 435/325.000; 435/375.000; 435/377.000; 435/378.000; 435/395.000;
435/402.000

IC [6]

EXF ICM: C12N005-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 294 OF 305 USPATFULL on STN
 AN 1998:104405 USPATFULL
 TI Methods for coextruding immunoisolatory implantable vehicles with a
 IN biocompatible jacket and a biocompatible matrix core
 Dionne, Keith E., Rehoboth, MA, United States
 Emerich, Dwaine F., Providence, RI, United States
 Hoffman, Diane, Cambridge, MA, United States
 Sanberg, Paul R., Spring Hill, FL, United States
 Christenson, Lisa, New Haven, CT, United States
 Hegre, Orion D., Green Valley, AZ, United States
 Scharp, David W., St. Louis, MO, United States
 Lacy, Paul E., Webster Grove, MO, United States
 Aebischer, Patrick, Lutry, Switzerland
 Vasconcellos, Alfred V., Cranston, RI, United States
 Lysaght, Michael J., E. Greenwich, RI, United States
 Gentile, Frank T., Warwick, RI, United States
 PA Brown University Research Foundation, United States (U.S. corporation)
 PI US 5800829 19980901
 AI US 1995-449274 19950524 (8)
 RLI Division of Ser. No. US 1994-179151, filed on 10 Jan 1994 which is a
 continuation-in-part of Ser. No. US 1991-693403, filed on 25 Apr 1991,
 now abandoned
 DT Utility
 FS Granted
 LN.CNT 3898
 INCL INCLM: 424/422.000
 INCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
 NCL 424/434.000; 424/437.000; 424/489.000; 424/490.000
 NCLM: 424/422.000
 NCLS: 424/423.000; 424/424.000; 424/426.000; 424/427.000; 424/430.000;
 424/434.000; 424/437.000; 424/489.000; 424/490.000
 IC [6]
 ICM: A61K009-50
 ICS: A61K009-14
 EXF 424/422; 424/423; 424/424; 424/426; 424/427; 424/430; 424/434; 424/437;
 424/489; 424/490
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 295 OF 305 USPATFULL on STN
 AN 1998:51459 USPATFULL
 TI In vitro growth and proliferation of genetically modified multipotent
 neural ***stem*** ***cells*** and their progeny
 IN Weiss, Samuel, Alberta, Canada
 Reynolds, Brent, Alberta, Canada
 Hammang, Joseph P., Barrington, RI, United States
 Baetge, E. Edward, Barrington, RI, United States
 PA NeuroSpheres Holdings Ltd., Calgary, Canada (non-U.S. corporation)
 PI US 5750376 19980512
 AI US 1995-483122 19950607 (8)
 RLI Continuation-in-part of Ser. No. US 1994-270412, filed on 5 Jul 1994,
 now abandoned Ser. No. Ser. No. US 1995-385404, filed on 7 Feb 1995, now
 abandoned Ser. No. Ser. No. US 1994-359945, filed on 20 Dec 1994, now
 abandoned Ser. No. Ser. No. US 1995-376062, filed on 20 Jan 1995, now
 abandoned Ser. No. Ser. No. US 1993-149508, filed on 9 Nov 1993, now
 abandoned Ser. No. Ser. No. US 1994-311099, filed on 23 Sep 1994, now
 abandoned And Ser. No. US 1994-338730, filed on 14 Nov 1994, now
 abandoned which is a continuation-in-part of Ser. No. US 1991-726812,
 filed on 8 Jul 1991, now abandoned , said Ser. No. US 1995-385404, filed
 on 7 Feb 1995, now abandoned which is a continuation of Ser. No. US
 1992-961813, filed on 16 Oct 1992, now abandoned which is a
 continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991,
 now abandoned , said Ser. No. US 1994-359345, filed on 20 Dec 1994, now
 abandoned which is a continuation of Ser. No. US 1994-221655, filed on 1
 Apr 1994, now abandoned which is a continuation of Ser. No. US
 1992-967622, filed on 28 Oct 1992, now abandoned which is a
 continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991,
 now abandoned , said Ser. No. US 1995-376062, filed on 20 Jan 1995, now
 abandoned which is a continuation of Ser. No. US 1993-10829, filed on 29
 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US
 1991-726812, filed on 8 Jul 1991, now abandoned , said Ser. No. US
 1994-270412, filed on 5 Jul 1994, now abandoned Ser. No. Ser. No. US
 1993-149508, filed on 9 Nov 1993, now abandoned And Ser. No. US

which is a continuation-in-part of Ser. No. US 1991-726812, filed on 8 Jul 1991, now abandoned

DT Utility

FS Granted

LN.CNT 4339

INCL INCLM: 435/069.520

INCLS: 435/069.100; 435/172.300; 435/325.000; 435/368.000; 435/377.000;
435/384.000; 435/392.000; 435/395.000

NCL NCLM: 435/069.520

NCLS: 435/069.100; 435/325.000; 435/368.000; 435/377.000; 435/384.000;
435/392.000; 435/395.000; 435/455.000; 435/456.000; 435/458.000;
435/461.000

IC [6]

ICM: C12N005-00

ICS: C12N005-08; C12N005-10; C12P001-00

EXF 435/240.2; 435/172.3; 435/69.1; 435/69.52; 435/325; 435/368; 435/377;
435/384; 435/392; 435/395

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 296 OF 305 USPATFULL on STN

AN 97:112318 USPATFULL

TI Neural crest stem cell assay

IN Anderson, David J., Altadena, CA, United States

Stemple, Derek L., Newton, MA, United States

PA California Institute of Technology, Pasadena, CA, United States (U.S. corporation)

PI US 5693482 19971202

AI US 1995-474506 19950607 (8)

RLI Division of Ser. No. US 1994-188286, filed on 28 Jan 1994 which is a continuation-in-part of Ser. No. US 1992-969088, filed on 29 Oct 1992, now abandoned which is a continuation-in-part of Ser. No. US 1992-920617, filed on 27 Jul 1992, now abandoned

DT Utility

FS Granted

LN.CNT 2114

INCL INCLM: 435/029.000

INCLS: 435/240.200

NCL NCLM: 435/029.000

IC [6]

ICM: C12Q001-02

ICS: C12N015-85

EXF 435/29; 435/240.2; 435/172.1

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 297 OF 305 USPATFULL on STN

AN 97:93884 USPATFULL

TI Compositions and methods for the delivery of biologically active molecules using genetically altered cells contained in biocompatible immunoisolatory capsules

IN Baetge, Edward E., Barrington, RI, United States

Hammang, Joseph P., Barrington, RI, United States

Gentile, Frank T., Warwick, RI, United States

Lindner, Mark D., Bristol, RI, United States

Winn, Shelley R., Smithfield, RI, United States

Emerich, Dwaine F., Providence, RI, United States

PA CytoTherapeutics, Inc., Providence, RI, United States (U.S. corporation)

PI US 5676943 19971014

AI US 1995-450316 19950525 (8)

RLI Continuation-in-part of Ser. No. US 1993-105278, filed on 12 Aug 1993, now abandoned

DT Utility

FS Granted

LN.CNT 2545

INCL INCLM: 424/093.210

INCLS: 424/093.300; 435/172.300

NCL NCLM: 424/093.210

NCLS: 424/093.300

IC [6]

ICM: A01N063-00

ICS: C62N015-00

EXF 424/93.21; 424/408; 424/425; 514/44

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 298 OF 305 USPATFULL on STN

AN 97:88884 USPATFULL

IN Anderson, David J., Altadena, CA, United States
PA Stemple, Derek L., Newton, MA, United States
California Institute of Technology, Pasadena, CA, United States (U.S.
corporation)
PI US 5672499 19970930
AI US 1995-478920 19950607 (8)
RLI Division of Ser. No. US 1994-188286, filed on 28 Jan 1994 which is a
continuation-in-part of Ser. No. US 1992-969088, filed on 29 Oct 1992,
now abandoned which is a continuation-in-part of Ser. No. US
1992-920617, filed on 27 Jul 1992, now abandoned
DT Utility
FS Granted
LN.CNT 2112
INCL INCLM: 435/240.400
INCLS: 435/069.100; 435/172.300; 435/320.100
NCL NCLM: 435/353.000
NCLS: 435/069.100; 435/320.100; 435/325.000; 435/368.000; 435/467.000
IC [6]
ICM: C12Q001-02
ICS: C12N015-85
EXF 435/69.1; 435/172.3; 435/320.1; 435/240.2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 299 OF 305 USPATFULL on STN
AN 97:70922 USPATFULL
TI Compositions and methods for the delivery of biologically active
molecules using cells contained in biocompatible capsules
IN Baetge, Edward E., Barrington, RI, United States
Hammang, Joseph P., Barrington, RI, United States
Gentile, Frank T., Warwick, RI, United States
Lindner, Mark D., Bristol, RI, United States
Winn, Shelley R., Smithfield, RI, United States
Emerich, Dwaine F., Providence, RI, United States
PA Cyto Therapeutics, Inc., Providence, RI, United States (U.S.
corporation)
PI US 5656481 19970812
AI US 1995-449946 19950525 (8)
RLI Continuation-in-part of Ser. No. US 1993-105278, filed on 12 Aug 1993,
now abandoned
DT Utility
FS Granted
LN.CNT 2543
INCL INCLM: 435/325.000
INCLS: 435/172.300; 435/347.000; 435/382.000; 435/373.000; 424/093.200;
424/093.210; 424/093.300; 424/093.700; 424/093.100
NCL NCLM: 435/325.000
NCLS: 424/093.100; 424/093.200; 424/093.210; 424/093.300; 424/093.700;
435/347.000; 435/373.000; 435/382.000
IC [6]
ICM: C12N015-00
ICS: C12N005-00; A01N063-00
EXF 424/93.21; 424/408; 424/425; 435/240.2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 300 OF 305 USPATFULL on STN
AN 97:68355 USPATFULL
TI Genetically engineered mammalian neural crest stem cells
IN Anderson, David J., Altadena, CA, United States
Stemple, Derek L., Newton, MA, United States
PA California Institute of Technology, Pasadena, CA, United States (U.S.
corporation)
PI US 5654183 19970805
AI US 1994-188286 19940128 (8)
RLI Continuation-in-part of Ser. No. US 1992-996088, filed on 23 Dec 1992,
now patented, Pat. No. US 5365699 which is a continuation-in-part of
Ser. No. US 1992-920617, filed on 27 Jul 1992, now abandoned
DT Utility
FS Granted
LN.CNT 2162
INCL INCLM: 435/172.300
INCLS: 435/069.100; 435/320.100; 435/325.000; 435/353.000; 435/368.000
NCL NCLM: 435/456.000
NCLS: 435/069.100; 435/320.100; 435/325.000; 435/353.000; 435/368.000
IC [6]
ICM: C12N015-85

EXF 435/69.1; 435/172.3; 435/240.2; 435/320.1; 424/93.21; 514/44
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 301 OF 305 USPATFULL on STN
AN 97:68153 USPATFULL
TI Compositions and methods for the delivery of biologically active molecules using cells contained in biocompatible capsules
IN Baetge, Edward E., Barrington, RI, United States
Hammang, Joseph P., Barrington, RI, United States
Gentile, Frank T., Warwick, RI, United States
Lindner, Mark D., Bristol, RI, United States
Winn, Shelley R., Smithfield, RI, United States
Emerich, Dwaine F., Providence, RI, United States
PA CytoTherapeutics, Inc., Providence, RI, United States (U.S. corporation)
PI US 5653975 19970805
AI US 1995-451044 19950525 (8)
RLI Continuation-in-part of Ser. No. US 1993-105278, filed on 12 Aug 1993, now abandoned
DT Utility
FS Granted
LN.CNT 2532
INCL INCLM: 424/093.100
INCLS: 424/093.200; 424/093.210; 424/093.300; 424/093.700; 435/172.300
NCL NCLM: 424/093.100
NCLS: 424/093.200; 424/093.210; 424/093.300; 424/093.700
IC [6]
ICM: C12N015-00
ICS: C12N005-00; A01N063-00
EXF 424/93.21; 424/408; 424/425
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 302 OF 305 USPATFULL on STN
AN 97:51871 USPATFULL
TI Method of isolating a lineage specific stem cell in vitro.
IN Gay, David A., San Diego, CA, United States
PA Plurion, Inc., Atlanta, GA, United States (U.S. corporation)
PI US 5639618 19970617
AI US 1994-242547 19940513 (8)
DT Utility
FS Granted
LN.CNT 669
INCL INCLM: 435/007.210
INCLS: 435/002.000; 435/007.100; 435/007.200; 435/006.000
NCL NCLM: 435/007.210
NCLS: 435/002.000; 435/006.000; 435/007.100; 435/007.200
IC [6]
ICM: G01N033-53
ICS: C12N005-02; C12N005-06; C12N005-10
EXF 435/2; 435/172.3; 435/240.1; 435/240.2; 435/240.21; 435/7.1; 435/7.21; 435/7.2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 303 OF 305 USPATFULL on STN
AN 97:51534 USPATFULL
TI Delivery of biologically active molecules using cells contained in biocompatible immunoisolatory capsules
IN Baetge, Edward E., Barrington, RI, United States
Hammang, Joseph P., Barrington, RI, United States
Gentile, Frank T., Warwick, RI, United States
Lindner, Mark D., Bristol, RI, United States
Winn, Shelley R., Smithfield, RI, United States
Emerich, Dwaine F., Providence, RI, United States
PA CytoTherapeutics, Inc., Providence, RI, United States (U.S. corporation)
PI US 5639275 19970617
AI US 1995-449756 19950525 (8)
RLI Continuation-in-part of Ser. No. US 1993-105278, filed on 12 Aug 1993, now abandoned
DT Utility
FS Granted
LN.CNT 2522
INCL INCLM: 604/891.100
INCLS: 424/422.000; 424/424.000; 424/093.100; 424/093.200; 435/172.300;
435/240.200
NCL NCLM: 604/891.100
NCLS: 424/093.100; 424/093.200; 424/422.000; 424/424.000; 435/325.000

ICM: A61K009-22
EXF ICS: C12N015-00; C12N005-00; A01N063-00
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 304 OF 305 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
AN 2003-441029 [41] - WPIDS
DNN N2003-352181 DNC C2003-116536
TI Implantable composition for stimulating neural tissue growth at lesion site, has cell compatible and bioerodabile material for tissue growth, and cell producing trophic factors and/or extracellular matrix molecules.
DC A96 B04 D16 D22 P31
PA (GOLD-I) GOLDBERG E P; (STOP-I) STOPEK J B; (STRE-I) STREIT J W; (UYFL) UNIV FLORIDA
CYC 100
PI WO 2003026489 A2 20030403 (200341)* EN 66 A61B000-00
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU
MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM
ZW
AU 2002330131 A1 20030407 (200468) A61B000-00
ADT WO 2003026489 A2 WO 2002-US30900 20020930; AU 2002330131 A1 AU 2002-330131
20020930
FDT AU 2002330131 A1 Based on WO 2003026489
PRAI US 2001-325190P 20010928
IC ICM A61B000-00

L6 ANSWER 305 OF 305 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
AN 2001-582442 [65] WPIDS
DNC C2001-172762
TI Preparing undifferentiated human embryonic stem cells for differentiation into neural progenitor cells, involves culturing inner cell mass removed in vitro fertilized human embryo under specific conditions.
DC B04 D16
IN BEN-HUR, T; PERA, M; REUBINOFF, B E; HUR-BEN, T; PERA, M F
PA (HADA-N) HADASIT MEDICAL RES SERVICES & DEV; (REUB-I) REUBINOFF B E;
(MONU) UNIV MONASH; (UYSI-N) UNIV SINGAPORE NAT; (HADA-N) HADASIT MEDICAL
RES SERVICES & DEV LTD; (ESCE-N) ES CELL INT PTE LTD; (HADA-N) HADASIT
MEDICAL RES SERVICES & DEV CO; (REUB-N) REUBINOFF; (BENH-I) BEN-HUR T;
(PERA-I) PERA M F
CYC 95
PI WO 2001068815 A1 20010920 (200165)* EN 125 C12N005-08
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001040361 A 20010924 (200208) C12N005-08
US 2002068045 A1 20020606 (200241) A61K045-00
US 2002164308 A1 20021107 (200275) C12N005-08
EP 1263932 A1 20021211 (200301) EN C12N005-08
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR
EP 1302536 A2 20030416 (200328) # EN C12N005-08
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC
MK NL PT RO SE SI SK TR
CA 2406610 A1 20030404 (200336) # EN C12N005-08
JP 2004500103 W 20040108 (200410) 181 C12N005-06
AU 2002301347 A1 20030612 (200455) # C12N005-08
JP 2004248507 A 20040909 (200459) # 170 C12N005-06
ADT WO 2001068815 A1 WO 2001-AU278 20010314; AU 2001040361 A AU 2001-40361
20010314; US 2002068045 A1 US 2001-808382 20010314; US 2002164308 A1 CIP
of US 2001-808382 20010314, US 2001-970543 20011004; EP 1263932 A1 EP
2001-911277 20010314, WO 2001-AU278 20010314; EP 1302536 A2 EP 2002-256974
20021004; CA 2406610 A1 CA 2002-2406610 20021003; JP 2004500103 W JP
2001-567299 20010314, WO 2001-AU278 20010314; AU 2002301347 A1 AU
2002-301347 20021004; JP 2004248507 A JP 2002-292682 20021004
FDT AU 2001040361 A Based on WO 2001068815; EP 1263932 A1 Based on WO
2001068815; JP 2004500103 W Based on WO 2001068815
PRAI AU 2001-2920 20010206; AU 2000-6211 20000314;
AU 2000-1279 20001106; EP 2002-256974 20021004;

JP 2002-292682 20021004

IC ICM A61K045-00; C12N005-06; C12N005-08
ICS A61K035-28; A61K035-30; A61K048-00; A61L027-00; A61P009-00;
A61P017-02; A61P025-00; A61P025-18; A61P025-28; A61P037-00;
A61P043-00; C12N005-10

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